DOCTORAL THESIS

Pronunciation intelligibility of Nigerian speakers of English

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Award date:
2019

Awarding institution:
University of Roehampton

PRONUNCIATION INTELLIGIBILITY OF NIGERIAN SPEAKERS OF ENGLISH

By

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A Thesis

Submitted in partial fulfilment of the requirements for the degree of PhD

in

English Language and Linguistics

Department of Media, Culture & Language

University of Roehampton

2018

Abstract

Traditionally, English language pronunciation teaching was typically based on native-speaker norms usually RP British English or General American in most cases. In other words, people studied English intending to interact with native speakers and attaining this “native-like” accent was the goal. However, in the light of the expansion of English as a global language such assumptions are in urgent need of reconsideration and re-evaluation, especially as the situation nowadays is shifting to a scenario where English is increasingly being used for communication world-wide between speakers of other languages (De Souza, 1999; Jenkins, 2000; 2007;2010; 2015). A growing body of research shows that there are now more linguistic exchanges between non- native speakers (NNS-NNS) of English than between non-native speakers and native speakers (NNS-NS) (Beneke, 1991; Mc Arthur, 2002; Crystal, 2003; 2012a; Kirkpatrick, 2006; 2007; Deterding, 2006; 2012; 2014). English is spoken all over the world, and it has become a lingua franca, a real international language and, as a result, intelligibility and successful communication are more important goals for learners than native-like accuracy. It is against this background that this study seeks to assess the pronunciation intelligibility of Nigerian speakers of English to different speakers of English interacting in international settings.

The study examines the phonological intelligibility of Nigerian speakers of English. Specifically, it investigates the extent to which segmental features of pronunciation (such as consonants, vowels, consonant clusters) in the speech of Nigerian Speakers of English affect their intelligibility to speakers from different contexts. 100 evaluators, (international listeners made up of non-Nigerian speakers) transcribed six speech samples from six audio podcasts in which Nigerian speakers delivered speeches. The transcription of the different speech samples served to assess intelligibility at pronunciation level (specifically segmental features). Results revealed that using vowel realisations distinct from the central vowels [ʌ], [ɜ:], and [ə] and [ɪ] caused intelligibility problems for international listeners. Apart from the quality of vowels mentioned, I also found that the length of vowels contributed to intelligibility breakdown. The non-

realisation of consonant such as the glottal fricative [h], the velar plosive [k], and dark (velarized) [l], or [ɬ] contributed substantially to the occurrence of intelligibility breakdown. The results also indicate that using consonant realisations distinct from the voiceless palato-alveolar affricate /tʃ/; voiced palato-alveolar fricative /ʒ/; and voiced alveolar fricative /z/ contributed to the presence of intelligibility problems. However, using consonant different from the dental fricatives /θ/, /ð/, velar nasal [ŋ], and postvocalic /l/ “substitution” such as L vocalisation did not hamper intelligibility.

In addition, a further consideration was made to include Nigerian listeners given the important role English plays as a language of wider communication among Nigerians of different ethnic groups who themselves have different language backgrounds. It was essential to examine the intelligibility between Nigerians in cross-cultural communication. Thus, the same speech samples of Nigerian speakers presented to the international listeners were presented to 50 Nigerians (with Hausa L1 and Yoruba L1 backgrounds) to transcribe. Results revealed that alternatives to the central vowels [ʌ], [ɜː], and [ə] were not a problem for Nigerian listeners except in few cases which could be attributed to unfamiliar lexis and context. The length of vowels and non-realisation of consonants did not hamper intelligibility. The findings also indicated that the difference in consonant realisations did not contribute to the occurrence of intelligibility problems except for the use of alveolar tap [ɾ] for plosive [t].

The findings of the study have significant pedagogical implications for the teaching of English pronunciation in Nigerian schools. Specifically, it will help raise awareness among teachers of the critical problems hindering intelligible pronunciation by Nigerian speakers of English which will be the primary focus in teaching and learning. In addition, it will inform teachers of the segmental features that are not important for international intelligibility so that Nigerian teachers can pay less attention to these features and devote lots of classroom time on only features that matter for intelligibility.

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Dedication

To God Almighty, the creator of heaven and the earth, the sea, and everything in them.

Acknowledgements

I hardly consider this PhD thesis a personal accomplishment. The completion of this project was only possible due to the immense support of God Almighty, my family, supervisors and friends. First and foremost, all glory goes to God Almighty who has enabled me to complete this project. May His name be forever praised.

I express my sincere gratitude to all my supervisory committee members – (Dr) Judith Broadbent, (Dr) Carole Sedgwick, (Professor) Mark Jary and late (Professor) Tope Omoniyi. I am profoundly thankful to them for their countless hours devoted to monitoring, editing and guiding me through this academic journey. I also want to thank them for the emotional support I got from them throughout this journey. I am also indebted to my two examiners, (Dr) Mario Saraceni and (Professor) Annabelle Mooney, for lending their critical eyes to my writing and providing me with constructive feedback to strengthen my arguments.

This thesis would not have been possible without my parents. I would like to thank my father, Rev Dr John Idowu and my mother, Rev Mrs Idowu for their love, trust, prayers, emotional and huge financial support throughout the development of this thesis but most importantly for their faith that I am worthy and gifted to complete such an undertaking.

I personally wish to express my deepest gratitude to my father who has been my rock. You have always freed me of any worries allowing me to focus solely on my work whilst continually showing your respect and admiration towards my thesis. I thank you for the words of encouragement that you gave me in moments of utter despair and self- doubt to keep my spirit up. Thank you for the conversations and debates that contributed towards the strengthening of my voice. You have taught

me to continually strive to make my dreams come true and to view each struggle as a beautiful memory that will remind me of how far I have come and what I have achieved. Thank you for being there and for being who you are.

To my mother, your patience, understanding and motherly support have been for me that warm and comforting blanket that calmed me during these emotionally and intellectually challenging experiences. You have endlessly expressed your love and support towards my work. In moments of emotional struggle with my work you kept telling me stories of those that succeeded, and, in your words, you normally say “I will make it and finish my PhD amazingly”, thus making this journey less isolated.

A special expression of thankfulness goes to my spiritual parents, Rev & Rev Mrs Olusola Areogun and Rev (Dr) & (Dr) Mrs Olonade for their support, prayers and encouragement. They have trusted my perseverance and aptitude to strive for higher and better.

It gives me immense pleasure to thank my husband, Emmanuel Olasebikan, who unquestionably believed in me by supporting my desire to pursue this intellectual curiosity. I thank you ever so much not only for your tolerance, support and encouragement but also for your encouragement to undertake this project. You have witnessed the development of this project from its beginning and you have stood by my side even in the most emotionally draining times that temporarily left me feeling powerless to carry on. Thank you for being the wind beneath my wings!

My deepest gratitude also goes to my siblings, Paul and Emmanuel Idowu, your support is much appreciated. The RSCJ sisters, Chris Edwards, Lorraine Pratt,

Janet and Maureen; and the head of Digby Stuart College, Jackie Brown, I say thank you all.

I thank all the academic members of staff at the Media, Culture & Language Department: (Prof) Annabelle Mooney, (Dr) Eva Eppler, (Dr) Stacey Abbot, (Prof) Caroline Bainbridge. You have all offered me advice and words of encouragement which tremendously enhanced my confidence towards my work.

I wish to thank my fellow PhD candidates Catherine Butcher, Nambam Ojo, Joseph, Michael, Ope, Nathalie Weidhase, Mirjana, Israel Olonade, Theodora Thomadakis, Dunsin Dabor, Peter and Funmi Obukadeta, for all the help, support and encouragement they kindly offered me throughout the journey. Worthy of special appreciation is my dear friend, (Dr) Gloria Appiah, who from the beginning of my PhD journey offered me great advice and help that encouraged me to take initiative in my own research work. I want to also extend my appreciation to Dr Damilola Oludele and Mercy Gabriel for your support throughout my field work.

Finally, a special thanks to the University of Roehampton for giving me the opportunity to take on this journey and for providing me with the finest resources and the necessary facilitating academic environment to develop this project.

List of Abbreviations

AmE	American English
BrE	British English
BBC	British Broadcasting Corporation
BNC	British National Corpus
COCA	Corpus of contemporary American English
CONX	Context
DLDS	Different language dyads
EIL	English as an International Language
ENL	English as a Native Language
ESL	English as a Second Language
ELF	English as a Lingua Franca
EFL	English as a Foreign Language
ELT	English Language Teaching
ECOMOG	Economic Community of West African States Monitoring Group
FRQ	Frequency of word
IELTS	International English Language Teaching System
IL(s)	International Listener (s)
ILT	Interlanguage Talk
L	Listener
L1	First Language
L2	Second or Foreign Language
LFC	Lingua Franca Core
LR	Listener response
ISIB-T	Interlanguage Speech Benefit- Talker

ISIB-L	Interlanguage Speech Benefit Listener
NigE	Nigerian English
NL	Nigerian Listener
NS(s)	Native Speaker (s) (of English)
NNS(s)	Non-Native Speaker(s) of English
NMA	Nigerian Medical Association
ORS	Orthographic representation of sound
RP	Received Pronunciation
SLA	Second Language Acquisition
SLDS	Same language dyads
SPK	Speaker
TK	Token
UI	Unintelligible
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organisation
VOICE	Vienna- Oxford International Corpus of English
WE	World Englishes

List of Symbols

Phonetic Symbols

Consonant phonemes		Vowel phonemes	
p	Pea	ɪ	Pit
b	Bee	e	Pet
t	Tea	æ	Pat
d	Did	ʌ	Cut
k	Cat	ɒ	Pot
g	Get	ʊ	Put
tʃ	Chain	ə	Potato
dʒ	Jam		
f	Fall	iː	Key
v	Van	ɑː	Car
θ	Thin	ɔ	Core
ð	This	uː	Coo
s	See	ɜː	Nurse
z	Zoo	eɪ	Bay
ʃ	Shoe	aɪ	Buy
ʒ	Vision	ɔɪ	Boy
h	Hat	əʊ	Low
m	Man	aʊ	How
n	Now	ɪə	Here
ŋ	Sing	eə	There
l	Led	ʊ ə	Moor
r	Red		
j	Yes		
w	Wet		

Source: Roach et al. (2006)

Chapter One
Thesis Introduction

1.1 Setting the Scene

My interest and passion for this research stem from personal experiences and encounters rather than solely theoretical interest. It is these personal experiences that I now turn to. The first is related to my experience during my master's degree programme in London.

In 2011, I travelled for the first time on a plane to the UK to study for my master's degree programme. While on the aircraft, the flight attendant and the cabin crew gave a series of pre-flight and air safety announcement, some of which I could not decipher. This is despite the fact that they spoke in English: a language I had spoken from infanthood in Nigeria. When dinner was being served on this flight, I requested for a "beef" pronouncing the word with a short vowel. It appeared the air hostess did not understand my pronunciation, so I repeated my request. At this point, I discovered that the air hostess still failed to understand what I wanted. I perceived that perhaps not to offend me she did not ask for clarification but said: "we serve chicken, vegetarian dishes and beef". I requested for the "latter/last one", so she checked her understanding "beef" (pronouncing it with a long vowel), and I said "Yes". Immediately, I recognised that my pronunciation of "beef" did not align with what she was used to.

After the aircraft landed, I requested a card from another flight attendant, pronouncing the vowel as a front open vowel [a]. The attendant did not

understand my request, and so I repeated my request by saying “landing card”. At this point, the attendant understood and handed me the “landing card”. I disembarked from the plane and made my way to the UK border agency where immigration officers were attending to people. I was a bit worried that they might not understand my pronunciation due to my previous experience on the aircraft. Soon it was my turn to be called from the queue; I made my way to a counter where an immigration officer attended to me. He asked me series of questions which I answered. I was greatly relieved when I found that he understood me, even though minor miscommunications occurred. I went on to claim my baggage and made my way to my university.

On subsequent days, I engaged in shopping in central London with many interesting experiences that have stayed with me. A particular one was when a friend and I entered Zara (a clothing store) and my friend (from Nigeria) asked one of the store attendants for a *bead chain*. The store attendant looked at my friend with a puzzled expression and asked her to say that again. My friend, a little annoyed, repeated her request by changing her utterance for the sake of clarity but still failed to make herself understood by the store attendant. At that point, she decided to call her supervisor to intervene. My colleague repeated her request, but the supervisor (who looked like a Norwegian) said we do not bid for chains but that she could get on eBay online. At that point, my friend asked for their accessories department. She was shown the department and found what she wanted. She showed the supervisor and the man said oh you meant “bead”. The problem was that my friend was using her Nigerian English and did not seem to be aware that the vowel quality and length she was producing in her

pronunciation of “bead” as [bid] made the word totally incomprehensible to the store attendant and her supervisor thus causing an instance of intelligibility breakdown.

As a result of these experiences, I decided to carry out my master’s degree dissertation on the pronunciation of Nigerians. I examined the pronunciation features of Nigerian secondary school students and compared it with Received Pronunciation since the norm of English language teaching in Nigeria has been the RP British English (Sotiloye, 2007; Awonusi 2009; Olaniyi 2014). I selected three different reading passages that appeared to be the most representative variation of English phonemes. These passages were read aloud by Nigerian secondary school students while being tape recorded. After the recordings, I listened to each of the three sets of tape recordings and described their pronunciation features. The major differences between the students’ pronunciation and Received Pronunciation were consonant /θ/, /ð/, /tʃ/, /l/, /h/ silence, /ʒ/, /ŋ/; vowels / ə/ /ʌ/ and /ɜ:/; and consonant cluster simplification (Olajide and Olaniyi 2013; Olaniyi 20`14). As a result of these findings, I distributed a set of questionnaires among the sixteen students, who took part in the research to find out what their goal was for learning English. The findings from the questionnaires show that intelligibility was the most important goal for these Nigerian students. They want to be understood when communicating in English. Due to the findings from my master’s degree dissertation, I embarked on my PhD programme at the University of Roehampton to investigate further the pronunciation intelligibility of Nigerian speakers of English.

The final set of experiences involved the ones that I had while attending an international research conference. I travelled to Poland to present aspects of my thesis. There were two Nigerians at the conference, and we all made our presentations. I got a lot of feedback during and after my presentation from other researchers. A Norwegian told me that I was very clear and precise in my presentation. The second Nigerian, who also presented, was worried that she did not receive any feedback. The same Norwegian explained that she did not understand some of her pronunciation. Prior to this conference, the other Nigerian speaker had never communicated with speakers from different nationalities before because she had never travelled out of the country.

Today, many Nigerian English speakers and many other speakers of English face situations similar to what my colleague and I faced. A person who has learned English as a medium of instruction and whose target pronunciation is British English one day finds themselves in a circumstance where he or she has to use it to communicate with people whose mother tongue is different from his/hers. The need for the investigation of the intelligibility of non-native English has been widely recognized since the language has established its status as the most powerful international language, as Strevens (1980) predicted.

The rest of this introductory chapter is organised as follows: In the next section, I briefly discuss the changing patterns, and changing realities in the use of English. This is followed by the rationale for conducting the research. An outline of the objectives and research questions, the potential significance of the study; and finally, an outline of the individual chapters of the thesis is presented.

1.2 Changing Patterns, Changing Realities in the Use of English

This study investigates the intelligibility of Nigerian speakers of English to Nigerian speakers and non-Nigerian speakers of English. It developed as a response to the changes in the role that English plays in the world today. In the past, the teaching of English to speakers of other languages was based on "native-speaker[1]" norms usually British English in the form of Received Pronunciation[2] and General American English[3]. In other words, people studied English intending to interact with native English speakers, who were considered by all to be the owners of the language, "guardians of its standards, and arbiters of acceptable pedagogic norms" (Jenkins 2000:5). "Native-like" accent was a parameter and a goal regardless of the status of English as "second" or "foreign" language. To achieve their goal, it was considered important for these speakers of other languages to approximate as closely as possible to the native standard, particularly with regard to pronunciation (either Received Pronunciation (RP) or General American (GA).

However, in recent years, the goals of English language teaching and the notion of the native speaker (NS) as the norm provider are being questioned (Nero, 2006) as a result of the rise of English as an international language (EIL) and the

[1] The distinction between "native-speaker" and "non-native speaker" has been criticised and considered a flawed and misleading dichotomy (see, among many others, Kramsch, 1993; Rampton, 1990; Davies, 1991; 2003;2004; Rajagopalan, 1997; Brutt- Griffler & Samimy, 2001; Jenkins, 2002; 2002; Saraceni, 2010).

[2] Received Pronunciation (RP) has been for centuries the accent of British English usually chosen for the purposes of description and teaching, in spite of the fact that it is only spoken by a small minority of the population (Roach, 2009a). It is frequently recommended as the most suitable form of British English for broadcasting and as the model for both first and second language instruction (Macaulay, 1988).

[3] General American (GA) is a cover term used for the group of accents in the United States that do not bear the marked regional characteristics of either the East (more precisely Eastern New England and New York City) or the South (mainly ranging from Virginia, the Carolinas and Georgia to Louisiana and Texas) (Giegerich, 1992). Along with RP above, GA is argued to be the variety used in the ELT curriculum, and its accent is the variety which has long been taught to foreign learners of English (Dauer, 2005).

reality that there are now more non-native speakers (NNSs) of English than native speakers (NSs) (Kachru &Nelson 1996; Graddol 1997; Crystal, 1997; 2003; Kachru, 2005; Svartvik & Leech, 2006; Kirkpatrick, 2006; 2007b; Jenkins, 2007; Deterding, 2011). Crystal (2003) estimates about 330 million L1 users and about 430 to 500 million L2 users. In fact, these figures exclude the non-native speaker population who learns English as a foreign language, and Crystal suggests there may be as many as one billion of them. In China alone, for example, the number of people learning English is greater than the total number of speakers of English in the United States and the United Kingdom combined (Taylor 2002 cited in Saraceni 2015). According to McArthur (2002), English is used in at least 90 countries (70 of which use English as an official language or semi-official language). Brutt-Griffler (2002), based on Crystal (1997), notes that 80% of the approximately one and a half of two billion English users in the world today belong to the category that use English for international communication purpose. This has led to 'a shift in the numerical balance of power between native and non-native speaker groups' (Rubdy and Saraceni 2006:5).

In line with the changes outlined above, a number of scholars have called into question the issue of who owns the English language and consequently, who is allowed to set the standards against which use is to be established. Jenkins (2000) argues that no one denies the rights of "native speakers" to establish their own standards for use in interaction with other "native speakers" and even with "non-native speakers". However, the important question is: what forms or models would be appropriate for successful interaction among international L2 speakers. According to Jenkins, the view that "native speakers" do not own English as an

international language (EIL)[4] has been held for a long time. Graddol, for example, asserted in his book, *the future of English*, 'Native speakers may feel the language "belongs" to them, but it will be those who speak English as a second language or foreign language who will determine its world future' (ibid:10). This position is expressed most emphatically by Widdowson (1994) who wrote:

> 'How English develops in the world is no business whatever of native speakers in England, the United States, or anywhere else. They have no say in the matter, no right to intervene or pass judgment. They are irrelevant. The fact that English is an international language means that no nation can have custody over it. To grant such custody of the language is necessarily to arrest its development and so undermine its international status. It is a matter of considerable pride and satisfaction for native speakers of English that their language is an international means of communication. But the point is that it is only international to the extent that it is not their language. It is not a possession which they lease out to others, while still retaining the freehold other people actually own it' (1994:385).

Given this reality of English, the concept of intelligibility has emerged as one of the goals or the most important criterion for English language teaching. In Trudgill's words, there is 'a greater fear that English is now used so widely around the world, and is in particular used by so many non-native speakers, that if we are not careful, and very vigilant, the language will quite rapidly break up into a series of increasingly mutually unintelligible dialects, and eventually into different languages (Trudgill 1998:29), much like the splitting up over time of Classical Latin into vernacular Romance languages (Rubdy and Saraceni 2006). Trudgill considers this to be a 'perfectly sensible point of view' for a language that has more non-native than native speakers and goes on to predict that while English

[4] English as an International Language (EIL) is used by some scholars as a blanket term for all uses of English involving NNSs worldwide and whether the interaction is with NNSs or NSs (Jenkins, 2007). It is also the most frequent alternative to 'ELF' (Modiano, 2009; Jenkins, 2007).

lexis is likely to undergo a process of 'homogenisation' by means of 'Americanisation', English phonology will undergo a process of disintegration. In line with Trudgill's point, Jenkins states that 'if the policy of "pluricentricity" is pursued unchecked, in effect a situation of "anything goes" …, there is a danger that these [non-native] varieties will move further and further apart until a stage is reached where pronunciation presents a serious obstacle to lingua franca communication' (Jenkins 2006:35).

To ensure mutual intelligibility in diverse societies, Quirk (1990) maintains the need for a standard model of native English for international communication. To him, the point of reference is necessarily an L1 variety of English, and the standard for intelligible English pronunciation is set by L1 English listeners. This has set the stage for researchers of World Englishes (WE)[5], and English as a Lingua Franca (ELF)[6] to make a case for which standards should be used to determine the intelligibility of English for international communication.

While an L1 English reference fits the research and teaching model for L1 English contexts of usage, scholars of WE and ELF contend that many L2 speakers of English today will not be interacting mainly with L1 English speakers. They assert that many L2 English users already speak their desired target English variety, such as Nigerian English and Indian English, even if it may not be an L1 variety of English. From the WE and ELF perspectives, L1 and L2 speakers of English

[5] The term "World-Englishes" to refer to the world's multiple varieties of English. It investigates new varieties of English as independent, named regional varieties, such as Indian English, and it generally focuses on features of pronunciation, lexis, grammar and discourse that make each variety distinct from the others (Kirkpartick 2007; Jenkins, 2009).

[6] English as a Lingua Franca (ELF) refers to communication in English between speakers with different first languages including, possibly, NSs (Jenkins, 2007; Seidlhofer, 2005).

are equally responsible for effective international communication, and research in L2 English contexts and English language teaching has been called upon to better reflect this new, more diverse global reality.

This thesis aims to contribute to this research by examining the pronunciation intelligibility of Nigerian speakers of English to both L1 and L2 listeners to help determine the priorities for pronunciation teaching of English in the international context. In the specific context of Nigeria, this research is important as statistics show that one out of every four Africans is a Nigerian (Adetula, 2013). For example, in 2017, the President of the Nigerian Medical Association (NMA) told New Telegraph that between 10,000 and 15,000 Nigerian doctors are now practising medicine outside the country (Adeyemi 2017). Nigerians are scattered all over the world: Saudi, U.S. UK, and the Soviet Union to mention but a few. Nigeria is the most populous black nation with approximately 167 million people (Adetula, 2013) and its size, natural resource endowment, economy, and influence in global affairs have continued to attract considerable scholarly and international companies' attention. No other country in the sub-region and very few in Africa as a whole can compare with Nigeria in terms of economic and military capabilities (Adetula, 2013; 2015). Nigeria plays a major role in international politics and has contributed to various peacebuilding and peacekeeping efforts in places such as Sierra Leone, Liberia and the Congo-ECOMOG (Sule 2013). Also, the country ranks as the fifth largest contributor to UN peacekeeping missions (United Nations 2014). Nigeria is the largest oil producer in Africa. Oil constitutes 75 per cent of government revenue, but the rapid economic growth is frequently found in the non-oil sector (IMF 2013: 8). Its

main trading partners include the European Union (EU), the United States, India, Brazil, and China and international business is growing fast. Moreover, the number of Nigerian students studying abroad has expanded due to this increase in international mobility.

Therefore, English language teachers are faced with students who will need to use English predominately in an international context to communicate with speakers from other first languages. Hence it is crucial to know the extent to which there are difficulties in the speech of Nigerian speakers of English when they communicate with other speakers from different linguistic backgrounds. A further consideration has to be made given the significant role English plays as a language of wider communication among Nigerians of different ethnic groups (see Chapter 3 section 3.3.2). Bamgbose (1998) argues that 'what should be a source of greater worry […] is a situation in which a variety of English is not intelligible to most of those for whom it is intended within the same country. For instance [one] would be more worried if Nigerian English is not intelligible, within Nigeria as compared with outside the country' (1998:11). It is against this background that this study further investigates the intelligibility between Nigerians (with speakers of the dominant languages in Nigeria, Hausa and Yoruba).

1.3 The Need for the Research

Kirkpatrick, Deterding and Wong (2008) maintained that a generally expressed concern about new varieties of English is that they may be unintelligible in international settings or contexts, and this is the main 'reason why they remain [rarely] promoted as possible linguistic models for the language classroom. In

contrast, it is the supposed international intelligibility of native speaker varieties of English that provides a substantial argument for their adoption as classroom models in many parts of the world' (2008:359). In Nigeria, for instance, the ministries of education recommend British English with Received Pronunciation as models for teaching, while at the same time downplaying the use of a local variety of English as a legitimate classroom model (Akindele and Adegbite, 1999; Okoro, 2017). Kirkpatrick, Deterding and Wong (2008) further stated that the debate regarding the international intelligibility of native-speaker varieties has shown remarkably resilient despite study (e.g. Smith and Rafiqzad 1979; Deterding 2005; Deterding and Kirkpatrick 2006) which demonstrates that some native English speaker varieties are in fact not as internationally intelligible as has generally been believed and, on the other hand, that many non-native varieties of English are more intelligible all over the world than is often thought, being more intelligible than certain native speaker varieties (Jenkins, 2000; Nelson, 2012; Deterding, 2013). It has been noted that empirical research that investigates the international intelligibility of non-native varieties is essential, therefore, 'as it may help in making decisions about their role in the language classroom - especially as many non-native speakers of English remain convinced that a native speaker variety of English provides a better classroom model than a non-native variety' (Kirkpatrick et al. 2008:360). It is hoped that this present study will also contribute, in some way, to the study of non-native varieties of English, specifically spoken Nigerian English.

Ufomata (1990a; 2015) in her discussion on the need to recognise different mutually intelligible varieties of non-native speaker English (including Nigerian

English) listed some steps towards achieving this. Firstly, she argues that 'it would be essential to study the varieties which have emerged in second language situations…' and secondly 'it would then be important to identify the areas which cause intelligibility failures within these accents' (1990:216). In the Nigerian context, considerable research has been carried out to describe the varieties of spoken Nigerian English that have emerged and among the more detailed ones are Jibril (1982), Bamgbose (1982), Ufomata (2015); Banjo (1971); Awonusi (2009); Odumuh (1987) Jowitt (2000); Udofot (2004, 2007), Gut (2004) and Bobda (2007). However, to date, the intelligibility of Nigerian English has not received much attention in the literature. Tiffen's (1974) study is the only major large-scale work that has been carried out on the intelligibility of Nigerian speakers of English. But his study prioritises British listeners' as evaluators of Nigerian speakers of English probably because the study was carried out some decades ago. In other words, it has traditionally overlooked the way Nigerian English is perceived by other speakers of English in international and intranational contexts. However, given the change in the use and users of English in the world today as discussed above, the current study is designed to address this gap in the research by also investigating the intelligibility of Nigerian speakers of English as determined by other speakers of English with different L1s, including different Nigerian L1s (Bamgbose, 1998; Ufomata, 2015).

1.4 The Objectives of the Study and Research Questions

My research question is: What segmental features of pronunciation used by Nigerian speakers of English affect intelligibility?

Within this question, there are two specific objectives: First, I seek to investigate the extent to which segmental features in the pronunciation of Nigerian speakers of English affect their intelligibility to international listeners made up of non-Nigerian speakers of English. Second, to investigate to what extent segmental features in the pronunciation of Nigerian speakers of English affect their intelligibility to Nigerian listeners.

1.5 Native and non-Native Distinction

The terminology “native speaker” (NS) and “non-native speaker” (NNS) are used in this study, to reflect the practice in the literature and academic circles. NS refers to those from Inner Circle countries for whom English is a mother tongue or first language (L1) while NNSs refer to those speakers of English from the Outer and Expanding Circles. It should be noted that the native speaker/non-native speaker dichotomy has been challenged by a number of scholars (Cenoz & Gorter, 2011; Cook, 1999, 2007; Holliday, 2006; Kubota, 2009; Leung, Harris, & Rampton, 1999; Rampton, 1990). Piller (2001:14) speaks of a “useless,” “debilitating,” and “unfair” idealisation of the native speaker, which should be discarded.

The term “native speaker” fails to recognise that many varieties of English in Outer circle countries, such as Singapore, are spoken not only as official languages but also in the home (Deterding, 2013). Again, it ignores the fact that English is often one of the several languages available in the repertoires of the multilingual populations of, for instance, India, Singapore and African countries. In such contexts, it is often difficult to ascertain which language is a person’s L1 and which is their L2. The term perpetuates the idea that monolingualism is the

norm when, in fact, precisely the opposite is true for the world at large. And, as Rampton (1990) points out, it suggests the ethnic Anglo speaker as a reference point against which all other Englishes sound be assessed, which cannot be acceptable or appropriate for a language that has passed into world ownership. Similarly, it is totally inappropriate, indeed offensive, to label as “non-native” speakers’ those who have learnt English as a second or foreign language and achieved bilingual status as fluent, proficient users. The perpetuation of the native/non-native dichotomy causes negative perceptions and self-perceptions of “non-native” teachers and a lack of confidence in and of “non-native” theory builders (Jenkins, 2000; 2002).

In an attempt to solve this problem, Rampton (1990) discusses a number of possible alternatives. However, a problem with these suggestions arises with the negative connotations of their opposites. For example, his “expert speaker” for a fluent speaker implies the use of “non-expert speaker” for a less fluent one, thus imposing just as much of a value judgment as does “non-native speaker”. The solution of Jenkins (2000) is to adopt the terms ‘MES’ (monolingual English speaker) for the majority of inner circle users, ‘BES’ (bilingual English speaker) for both native speakers and fluent bilingual speakers of English, and ‘NBES’ (non-bilingual English speaker) for non English-speaking bilinguals. This terminology is rather awkward, and Jenkins herself relies mainly on the native/non-native distinction in her later work (for example, Jenkins 2007). This present study will employ the terms “non-Nigerian speakers” for “native and non-native speakers of English” and ‘Nigerian speakers’ for Nigerian speakers of English.

1.6 Potential Significance of the Study

This study will be used for a number of purposes. In general, it can be relevant to the linguist, and to those particularly interested in the concept of intelligibility. It can also be useful to those interested in the intelligibility situation between Nigerian speakers of English and non-Nigerian speakers. This is more so because it takes a step forward to measure the intelligibility, not only of Nigerian speakers of English to non-Nigerian speakers but also of Nigerian speakers of English to Nigerian speakers. The investigation will also be useful to those linguists who are attempting to establish a form of English that caters for the needs of international intelligibility. Jenkins (2000), observes that there is a dearth of literature on intelligibility to help move the project forward.

In this present study, “error” is no longer assessed based on prescribed “native speaker” norms but based on the effect certain pronunciation features have on intelligibility; i.e. what is deemed to be intelligible to the participants of specific interactions (Jenkins, 200a). This allows for language teaching and learning goals to be based on the context and the users of English, and thus reduces the need for dependence on native speaker norms which are not suitable for all the language learning contexts.

It is hoped that this present research will have significant pedagogical implications for the more effective teaching of English pronunciation in Nigerian schools. The pressure to cover the course contents or syllabus within a limited framework of time together with difficulty experienced in teaching and learning English pronunciation in Nigeria make it impossible for teachers to undertake the

comprehensive teaching of the syllabus. I consider that the findings from this present study will inform teachers with areas to focus on their tasks. For instance, they may focus less on the pronunciation features that rarely cause intelligibility problems when Nigerian speakers of English communicate with other speakers of English from different national contexts. In addition, it will help raise awareness among teachers of the key problems hindering intelligible pronunciation by Nigerian speakers of English which will be the major focus in teaching and learning. In sum, I expect the findings of this study to generally enhance the curriculum of English teaching in Nigeria.

1.7 Outline of Thesis

Following this introductory chapter are seven chapters. Chapter two considers the spread of English around the world and the different models that have been proposed by scholars to explain this global spread of English.

Chapter three discusses a detailed description of the linguistic situation of Nigeria. It further explains Yoruba language, the mother tongue of the Nigerian English speakers in the present investigation. This is followed by an overview of the phonology of Yoruba language. Next, it discusses the history of English in Nigeria and the role it plays in Nigeria. The chapter then progresses to discuss the varieties of Nigerian English.

Chapter four focuses on defining and explaining the concepts of intelligibility. It considers the nature of intelligibility, including the distinction between intelligibility, comprehensibility, and interpretability proposed by Smith and

Nelson (1985). At the same time, it explicitly and critically reviews empirical research on intelligibility and looks at how mutual intelligibility is approached in terms of NS-NS communication, NNS-NS communication, and NNS-NNS perspective.

Chapter five sets out the methodology of the study. It explains in detail the various decisions taken in designing the methodology in terms of the material used to assess intelligibility. It also discusses the population of the study, means of gathering the data, ethical principles and issues, and challenges encountered in the field. Data analyses techniques are also explained.

Chapter six and seven moves onto the findings and discussion of the main study. Firstly, it presents and discusses the segmental features that caused intelligibility breakdown when international listeners listened to Nigerian speakers of English while the seventh chapter presents the segmental features that caused intelligibility failure when Nigerian listeners listened to Nigerian speakers of English.

Chapter eight, the concluding chapter, discusses the implications of the findings of this study in terms of teaching English pronunciation to Nigerian speakers of English and in terms of learning. The chapter goes ahead to discuss the key findings. In addition, it states the limitations of the study and proffers suggestions for future research.

Chapter Two
The Global Spread of English

2.0 Introduction

In this chapter, I discuss the spread of English around the world and the different models that have been proposed by scholars in order to provide an explanation for the global spread of English from different perspectives, be it from its historical chronological sequence, to how it was spread for acquisition or educational purposes. The spread of English can be attributed to the combination of various historical developments, political events, economic, cultural and technological factors but the three main factors that are often cited in the World Englishes literature and that will be discussed in this study are: the expansion of the British Empire (i.e. early dispersal of English to settlement areas and the movement of English people to exploitation colonies), the industrial revolution and the rise of United States as an economic and political superpower and finally the phase of globalization and the rise of the world's lingua franca. My aim in this section is to establish a better understanding of the historical spread of English to many parts of the world and emergence of several varieties of the language all over the world.

After discussing the factors that led to the spread of English, the chapter examines models put forward to explain the global spread of English. My aim here is not to provide all the models to date but to focus on the more pertinent paradigms/models often mentioned in relation to the English as an international language (namely the World Englishes paradigm, and ELF paradigm).

2.1. Some factors that led to the spread of English

2.1.1 The Expansion of the British Empire

The first occurrence that marks the beginning of the global spread of the English language is the expansion of British colonial power since the 16th century (Crystal 1997) beyond the British Isles. The language became a tool of imperial expansion and finally gained a special place in the history of a significant number of countries. The colonial expansion will be discussed in two stages: the spread to settlement area and the spread to exploitation areas.

2.1.1.1 The Spread of English to Settlement Areas

The earliest stage in English colonial expansion was the large-scale migrations of mother tongue English speakers from the British Isles (Scotland, Wales, and Ireland) to North America, Australia and New Zealand in the seventeenth and eighteenth centuries. The establishment of English-speaking colonies in North America at the beginning of the seventeenth century was the first critical stage in the colonial expansion of Britain that made English a global language (Graddol et al., 2007). Although in the fifteenth century there were a few settlements by the Portuguese and Spanish, expansion into North America really began in the early 1600s. The first permanent English settlement dates from 1607 when an expedition arrived in Chesapeake Bay (Crystal 2003). The colonists called their settlement *Jamestown* and the area *Virginia* (Bolton 2003). Further settlements quickly followed Plymouth and Massachusetts in 1620. Over the following 150 years, 13 colonies emerged along the eastern seaboard, where the majority of settlers were English speakers from various parts of Britain and Ulster.

Towards the end of the eighteenth century, English had spread to Australia and New Zealand. In the case of Australia, the English language found its way through the establishment of penal colonies in Sydney in 1788. At this point in time, it was believed to be a simple solution to the problem of overcrowded prisons in England. Crystal (2003) states that about 130,000 prisoners were transported to prisons in Australia from Britain during the fifty years after the arrival of the 'first fleet' in 1788. 'Free' settlers, as they were called, also started to enter the country from the very beginning of the 18th century, but they did not attain substantial numbers until the mid-nineteenth century. From then on, immigration rapidly increased. By 1850, the population of Australia was about 400,000, and by 1900 nearly 4 million. In 2002, it was nearly 19 million. The British Isles provided the main source of settlers, and thus the main influence on the language. Many of the convicts came from London and Ireland and features of the Cockney accent of London and the brogue of Irish English can be traced in the speech patterns heard in Australia today (Crystal 2003). The settlement of New Zealand by the British occurred later in 1840 through the arrival of "free" English settlers, as they were called then. 'In contrast with Australia, New Zealand, was settled as a free colony and attracted immigrants from England and Scotland' (Mcintyre 2009:27).

In all cases of the settlement, large-scale immigration of English speakers displaced existing populations. For the existing population, the introduction of the English language often resulted in the extinction of many local languages. For instance, Saraceni (2015) states the case of the Aboriginal population in Australia which was reduced to a fraction of its original size within a short period of time. As people from Britain (mostly convicts at the start) replaced the Aboriginals,

hence the English language substituted the Aboriginals' languages. The majority of Aborigines in Australia nowadays speak English as a first and only language, and all but twenty indigenous languages are almost completely extinct with just eleven per cent of Aboriginal and Torres Strait Islanders speaking an indigenous language at home (Kiesling, 2006; Galloway and Rose 2015). A similar displacement of the indigenous population by settlers happened in North America and in New Zealand.

2.1.1.2 The Spread of English to Exploitation Areas

The previous sub-section discussed the early spread of English from the British Isles to settlement zones. However, this sub-section examines the dispersal to and growth of English in exploitation areas. This came as a result of slavery and colonization in Africa, South-east Asia, and the South Pacific. The earliest contacts of English in Africa can be traced to the sixteenth century when sailors of British merchant companies travelled to West Africa to trade in ivory, slaves, and spices. At this stage, English seems to have been an important trade language. In 1652, the first slaves in North America were captured and brought from Sierra Leone to the Sea Islands off the coast of the southern United States (US Embassy Post, 2010). During the 1700s there was a trade boom bringing slaves from Africa to the plantations of South Carolina and Georgia where their rice-farming skills made them particularly useful in the White settlers' farmlands. The slaves who were captured and taken to the colonies (such as the United States) did not necessarily speak the same language (Galloway and Rose 2015). Hence, to communicate with each other and with their master in the plantations (the British settlers), the English language was used as a contact language but,

for subsequent generations, this English became a first language. Therefore, slavery resulted in the emergence of English pidgins and creoles. The slave trade according to Galloway and Rose ‘spread English in vastly different ways than the migration of European communities via settler colonization (2015). It also spread English in very different ways than the pidgins and creoles that developed as a second language in exploitation areas’ (2015:10).

In 1787 the British helped many freed slaves from the United States, Nova Scotia, and Great Britain return to Sierra Leone to settle in what they called the "Province of Freedom”. Thousands of slaves were returned to Freetown. Most of the slaves chose to remain in Sierra Leone (US Embassy Post, 2010). In 1792, Freetown became one of Britain's first colonies in West Africa, and new British colonies were established in Africa after 1880. The returned freed slaves or “Krio” as they were called were from all areas of Africa. They were cut off from their traditions and homes by the experience of slavery; they integrated some aspects of British styles of life and started a flourishing trade on the West African coast (US Embassy Post, 2010). Some of the freed slaves returned to Nigeria from Sierra Leone and settled in Lagos and Abeokuta where they were known as “Saros” and “Krios”, and they freely used the English language in their new settlements (Awonusi, 2009).

Much later, colonialism reached other parts of Africa in the nineteenth century. New British colonies were established in Africa after 1880 and between that date and the end of the century nearly the whole continent was seized and shared out among the European powers. However, these new colonies were not repopulated

with British settlers. Instead, the new colonies were administered by a small number of British officials while they used indigenous rulers such as “Kings”, “chiefs” “headmen”, “warrant chief” to govern their colonies. In this way, the British acquired a large number of territories mainly in Africa. They had to eventually educate the local rulers in English, and a number of the local officials used English-based pidgins in addition to the languages they already spoke. As Saraceni (2015:47) points out “English was mainly a means of communication between the British and the local ruling classes. Local languages were not replaced, although their prestige was lowered’.

Colonization of Southeast Asia in many ways followed a pattern similar to that in African colonies. English was brought to South Asia (now India, Pakistan, Nepal, Bangladesh, and Bhutan), Hong Kong and Singapore towards the late eighteenth century. For instance, the establishments of East India trading company by British merchants to further expand trade with the East Indies contributed to colonization in Southeast Asia. The company had a lot of political influence in the East Indies and gradually took over India and administered it on behalf of the British government. English continued to spread through various forms in each of the countries in Southeast Asia. In both Africa and Southeast Asia colonies, English was adopted for administrative purpose alongside with the indigenous languages.

After the Second World War, the British control of their empire started weakening and the former colonies started gaining independence. At the end of the colonial era, most former colonies had to grapple with multi-ethnicity and multilingualism and as a result, English gradually grew to become the major medium for inter-

ethnic communication and the official language while local languages were adopted as national languages. As English was used alongside the local languages, “New Englishes” emerged. The label New Englishes generally refers to emerging and increasingly localized forms of English in post-colonial settings, such as Malaysia, Nigeria, Singapore, and India. According to Platt, Weber and Ho (1984:2-3 cited in Erling 2004), ‘a New English is a variety developed through an education system where English is a medium but it is not the core language spoken by most of the population’. Additionally, a New English has a more extended range of users, registers and style range in the social contexts of a nation. English is not only used in the domains of administration, government, commerce, law, the military, education, media, and religion but also is used as a lingua franca among those speaking different languages (inter-ethnic communication). Moreover, it has developed a ‘distinctive local flavour’ (Bamgbose 2006:105), nativised, indigenized to accommodate the sociolinguistic and socio-cultural contexts of the people who have adopted some linguistic features which vary from British and American norms, such as varying pronunciation and intonation patterns; a minor divergence in grammar and sentence structure; and, most distinctly, different words and expressions, which include borrowings from contact languages. The use of “New English” has eventually led to a very interesting area of research of the English language during the last two decades (Atechi, 2004).

2.1.2 The Industrial Revolution and Rise of the United States as Super Power

As discussed in the previous section, the expansion of the British Empire was the first step in the spread of English but the Industrial Revolution was also very

important in causing the spread of English around the world. Britain was the world's leading industrial and trading nation between the eighteenth century and the beginning of the nineteenth century. The developments of large-scale manufacturing and production machinery were some of the major technological advancements being established in Britain. This development meant that new terminology of technological and scientific advance had an immediate impact on the English language generating new vocabulary items for the English lexicon. The fact that those innovations were established from Britain meant that countries which needed this new industrial knowledge would need to learn English in order to access it (Crystal 1997). But by the end of the nineteenth century and the early twentieth century, the USA had overtaken Britain as the world's most productive and fastest growing economy in the world (Crystal 1997:8). It was the rise of the United States as the leading economic, military, and scientific power that reinforced the dominance of English. As Jenkins explains, the USA's dominant economic position 'acts as an attraction for international business and trade, and organisations or institutions wishing to develop international markets are for this reason under considerable pressure to work with English' (Jenkins 2015:43).

2.1.3 Globalization and the rise of English as world's lingua franca

The last factor that ensures the leading position of English worldwide over recent years has been the force of globalisation. Definitions of globalisation differ from one domain to another (e.g. economics, sociology or anthropology) but generally, they have in common the phenomenon of connection between corporations, nations and individuals (Vaish, 2008:30). For example, Held et al., (1999:27) maintain that globalisation is worldwide or global interconnectedness in all

aspects of life. This means that communities all over the world are now connected to each other in ways that were not possible in the past (Mclntyre 2009:32).

The feeling that the world is interconnected has been greatly augmented by developments in media and communications technology. Information technology developers such as Microsoft and IBM are seen as both perpetrators and products of globalization. As English, has often accompanied these technological innovations (since many of them were developed in the USA), the spread of the language has been closely associated with the technological revolution that came at the end of the 20th century. For example, Erling (2004) maintains that 'the availability of satellite communication has brought quick images (via BBC, CNN etc.) to televisions around the world. Also, new forms of media and new information technology, such as mobile phones, the internet, and email, allow people around the world to be in constant and immediate touch with each other' (ibid:14). For example, a person can communicate nowadays through emails with colleagues, family and friends in other countries and receive replies within seconds. Even now technology is more advanced as there are video and instant messaging applications such as Skype, Viber, Hangout, Whatsapp, Facebook, on phones, tablets and computers that allows a person to make video calls, voice calls and instant messaging to personal and business contacts across the world something that would have been impossible not so long ago. In fact, technology has connected what would once have been distant and remote communities and this gives the illusion that we are physically closer to such communities than might once have been the case.

Another feature of globalisation that adds to the feeling of interconnectedness is an increase of mobility (Mooney and Evans 2007): The world has been experiencing what Tope Omoniyi (2010) describes as the largest ever movement of people across national open borders. Aeroplane travel has become more accessible and affordable, tourism is no longer only for the elite and holiday makers regularly go abroad to destinations further from home. Side by side with global tourists and travellers are exiles fleeing from famine, war, torture, persecution and genocide, as it has been found that 'economic and social inequalities and consequential displacements of population have magnified in recent years and have forced mobility upon many' (Urry 2001 cited in Erling 2004:15). This has resulted in what Erling (2004:15) calls a 'stream of movement': "tourists, immigrants, refugees, exiles, guest-workers and other moving groups and individuals constitute an essential feature of the world and appear to affect the politics of nations to a hitherto unprecedented degree".

Besides technology and the movement of people across borders stated above, it is important to mention that with globalisation also came the increase of firms who conduct business internationally or transnationally (Erling 2004). Much of the world has seen the deregulation of financial markets, which allows cash flow across state boundaries. Transnational companies (TNCc) account for 70 percentage of world trade, perhaps 25% of total global output, certainly 80% of information technology trade, and 90% of private research and development (see Roberstson 2003:198). Due to these global trends, many corporations have relocated to countries where labour and production are much cheaper: "the production of everything from automobiles to sports equipment… can shift, more

or less rapidly, to whatever in the world the materials, labour force, infrastructure and tax breaks are most advantageous" (Waswo 2002:40). For example, 65% of the workforce of IBM and Exxon are based outside the United States (Davidson 2011).

It is not only companies that are increasingly operating internationally, but also international organisations (IGOs), like the United Nations (UN), the World Trade Organisations (WTO), and the World Bank (WB), and transnational non-governmental organisations (NGOs), like Amnesty International and Child Soldiers International. Since the UN was formed in the 1950s, partially as a means to avoid the reoccurrence of tragedies that took place in the first half of the 20th century, there have been increasing efforts to solve problems internationally. Sue Wright (2000:95) notes that the global nature of many problems, for example, in crime, health, the environment, population growth and poverty, has resulted in the mushrooming of the number, importance and role of NGOs in the 1990s. It is uncertain how many NGOs exist in the world, but there are many millions. It is estimated for example that in India alone there are 2 million national and internationally NGOs (Aras and Crowther 2010). The BBC World Service reported that across the world, the number of internationally operating NGOs is around over 40,000. Such organisations have been involved in forming global platforms. Wright (2000:95) notes that "the growth of NGOs provokes more transnational structures, more international cooperation and consequently more dialogue and contact between speakers from different language backgrounds," This has resulted in an increase in English used internationally, as several organisations use English as one of their main languages- if not the main

language- of communication (Omoniyi 2010). Although many of these newly merged TNCs and NGOs may not have their headquarters in an English-speaking country, joint ventures typically adopt English as their working language, a policy which in turn promotes a local need for English and results in increase interaction in English (House 2002:246).

Having considered the factors that led to the spread of English in the world, we shall now examine what makes English an international language in the following section.

2.2 English: a truly global/international language

Today, it has become difficult to travel anywhere in the globe without finding English in daily use, especially in large cities. It is used so greatly in television, film, and music transmitted by radio and by satellite television (Tom McArthur 1998). English has become part of the everyday life of many people from various linguistic and cultural backgrounds, and this is also true in countries where it is not a primary language but has acquired a secondary and often a supranational function. For instance, in many countries (e.g. in Greece and Israel) where English is not an official language, road signs are frequently written in both the local language and in English, shop fronts in the world's major cities may have English signs, and business names and several products in these shops also have English names (McArthur 1998, Galloway and Rose 2015). English has made its way into pop culture, resulting in English use in pop group names, song lyrics, and product marketing. It is, by international treaty, the official language for aeronautical and maritime communications. It is the language of hotels, internet,

politics, business, education, media, diplomacy, sport and an official language of the United Nations and many other international organizations, including the International Olympic Committee.

Crystal (2003:3) explains that a language is not a global language because the majority of people in a number of countries speak it as a mother tongue or native language, but only ‘when it develops a special role that is recognised in every country’. To illustrate the above statement, he then goes on to consider ‘what are the many different perspectives of the notion of ‘special role’. With reference to English, one can consider a special role assigned in countries where English is spoken as a native or other tongue and this includes not just five, namely United States of America, Canada, Britain, Ireland, Australia and New Zealand, but also other countries such as South Africa and some Caribbean countries where it is the first language. However, having mother tongue speakers or native speakers alone are insufficient to make English a global language. It has to be assigned a special role in other countries where different mother tongues are spoken, for example, Singapore, India and Nigeria. This according to Crystal (1997, 2003) happens in two ways, the first is when English is assigned as the official language and used in official domains such as education, law, business, administration and the media. A country such as Nigeria exemplifies this phenomenon where English is designated as the official language of the country and the language used for education, governance, politics and the media. McArthur (2000) maintains that English is used in over seventy countries as an official or semi-official language. The second way that the language can be given a special role is when it is taught as an important foreign language in schools and universities of the countries

where a different mother tongue exists. There are over a hundred countries, such as Japan, China and Korea, for example, where English is made a priority in the country's foreign language learning policy (Low 2014).

Mckay (2002) points out that it is not the number of "native speakers" of English but a large number of native speakers of other languages who speak it that make English a 'language of wider communication' and therefore an international language. In fact, a growing body of research shows English is used more among non-native speakers (NNS-NNS) of English than between its native speakers (NS-NS) or between non-native speakers and native speakers (NNS-NS) (Crystal, 2003). For example, Crystal (2008 cited in Low 2014) gives an estimate of about two billion speakers of English around the world. Second language users of English according to Crystal's 2003 estimate accounts for about 430 million, first language (L1) users about330 million with the exception of learners of English which Crystal suggests may be as many as one billion of them. Considering the fact that English is used not only between people from different countries but also for intra-national communication in multilingual communities, it can be said that English has both an international and an intra-national status. Describing English in a global and local sense, Mckay (2002:12) in reframing Smith's (1976) listing of the features of international language states the following four revised criteria for EIL:

1. As an international language, English is used both in a global sense for international communication between countries and in a local sense as a language of wider communication within multilingual societies.

2. As English is an international language, the use of English is no longer [exclusively] connected to the culture of the Inner Circle countries.

3. As an international language in a local sense, English becomes embedded in the culture of the country in which it is used.

4. As English is an international language in a global sense, one of its primary functions is to enable speakers to share with others their ideas and culture.

With the four redefined criteria presented by McKay (2002) above, it is obvious that English fits nicely into all the above categories and therefore qualifies as an international language. It is easy to draw out examples that exemplify the above mentioned criteria. To take the first criteria, English in many countries such as Nigeria and India functions as both a language of intra-and inter-national communication. For example, Nigeria is a multilingual setting, where English operates side by side with several indigenous languages (as discussed in chapter three). It is not exactly clear how many languages are spoken in Nigeria, but the number of languages listed for Nigeria by *Ethnologue*, a database of language resources, is 521.8 (Rotimi, 2009).

To take the second and third criteria together, there are many linguistic innovations in the area of phonology, syntax, lexis, collocations, and idioms that demonstrate that the English language has undergone nativization, acculturation, in the sense of being used to express the local culture of the community (Ling Low, 2010). For instance, some of the lexis in Nigeria include words such as “to flit a room” (meaning to spray it with an insecticide), “to Xerox a document”

(meaning to make a photocopy of it.) “Big man” (meaning important personality), “cash-madam” (meaning a wealthy woman), “bottom power” (meaning undue influence with sex) (see section 2.2.3.1 for a discussion on Nigerian English). Lastly, in today’s digitally connected world, it is clear that the number of websites using English alone is enough to persuade anyone of the power of English to communicate and share ideas, knowledge, and information on a global scale (Ling Low, 2010).

2.3 Theoretical Paradigms of the Global Spread of English

It is obvious from the previous section that what makes English different from other lingua francas of the past is the function it performs in every country and the diversity of people using it today (Galloway and Rose 2015). Because of such diversity, many frameworks or models have been put forward by scholars to explain social variation in English as a global language (Bolton 2005; Brutt-Griffler 2002; Jenkins 2000; 2006; 2009; Kachru 1986; Kirkpatrick 2010a; 2011; Seidlhofer 2005; Smith 1976; 1979; 1981; 1982; Sharifian 2009). Several of these models are discussed in this section. It should be noted that it is not the purpose of this section to present or evaluate all the models. Instead, the more pertinent paradigms often mentioned in relation to the English as an international language (EIL hereafter) will be discussed, namely the World Englishes paradigm, and the ELF paradigm.

2.3.1 The World Englishes (*WE*) Paradigm

2.3.1.1. A Tripartite model: ENL, ESL, EFL

The spread of English around the world is often discussed in terms of three distinct groups of users: English as a native language (ENL), English as a second language (ESL), and English as a foreign language (EFL) (Quirk, 1972; Jenkins, 2015). **English as a native language** (ENL) refers to countries where English is the primary language of the majority of the population and it is acquired as the first language by children. Kachru (1992a:356) refers to these countries (mainly the UK, USA, Canada, Australia, and New Zealand) as "the traditional cultural and linguistic bases of English". **English as a second language** (ESL) refers to countries where English is used as a second language and it serves a range of functions. It is usually one of the official languages of the country. These countries are typically ex-colonies of the United Kingdom or the United States such as India, Bangladesh, Nigeria, and Singapore. **English as a foreign language (EFL)** is the English of those whose countries were never colonised by the British, and for whom English serves little or no purpose within their own borders. Historically, they typically learned the language to use it with its native English speakers in the US and UK. Examples of countries in the EFL group are Korea, China and Japan.

Although the three-way model provides a useful starting point from which to move on to the present, the changes that have occurred in the most recent decades have rendered the categorisation to be problematic. This is because it is increasingly difficult to classify speakers of English as belonging purely to one of the three categorisations mentioned above.

A further problem adding to the confusion or difficulties of the model is that it ignores the fourth group of users, namely those who speak English as a Lingua Franca (Jenkins, 2015). Speakers of English as a lingua franca who use English for intercultural communication are now arguably 'the world's largest English using group' (Jenkins, 2015:11).

2.3.1.2 Strevens's World Map of English

The oldest model of the spread of English was developed by Strevens. His world map of English (see Figure 2.1), first published in 1980, shows a map of the world on which is superimposed an upside-down tree diagram demonstrating the way in which the spread of two main branches: American and British English, along with the other varieties have developed. His model assumes that the central distinction is that between British English and American English and that all other varieties can ultimately trace their "ancestry" to these two varieties (British English and American English). So, the model primarily reflects 'geography and the geopolitical map of the world' (Saraceni 2010:61). The model, however, is quite America-centric in that it positions American English with British English and does not represent the ancestries of American English in British English (Galloway and Rose 2015). Other Englishes, such as Irish English, which is older than American English, are relegated to smaller branches, therefore historical representation is also to some extent confused. By placing American English and British English on top of the model indicates this model promotes a stereotype that American English and British English are in some way the fundamental central Englishes of the world. The model has also been criticized for failing to show foreign

language speakers even though it shows how speakers of English as a primary and official language are located around the world (Jenkins 2003).

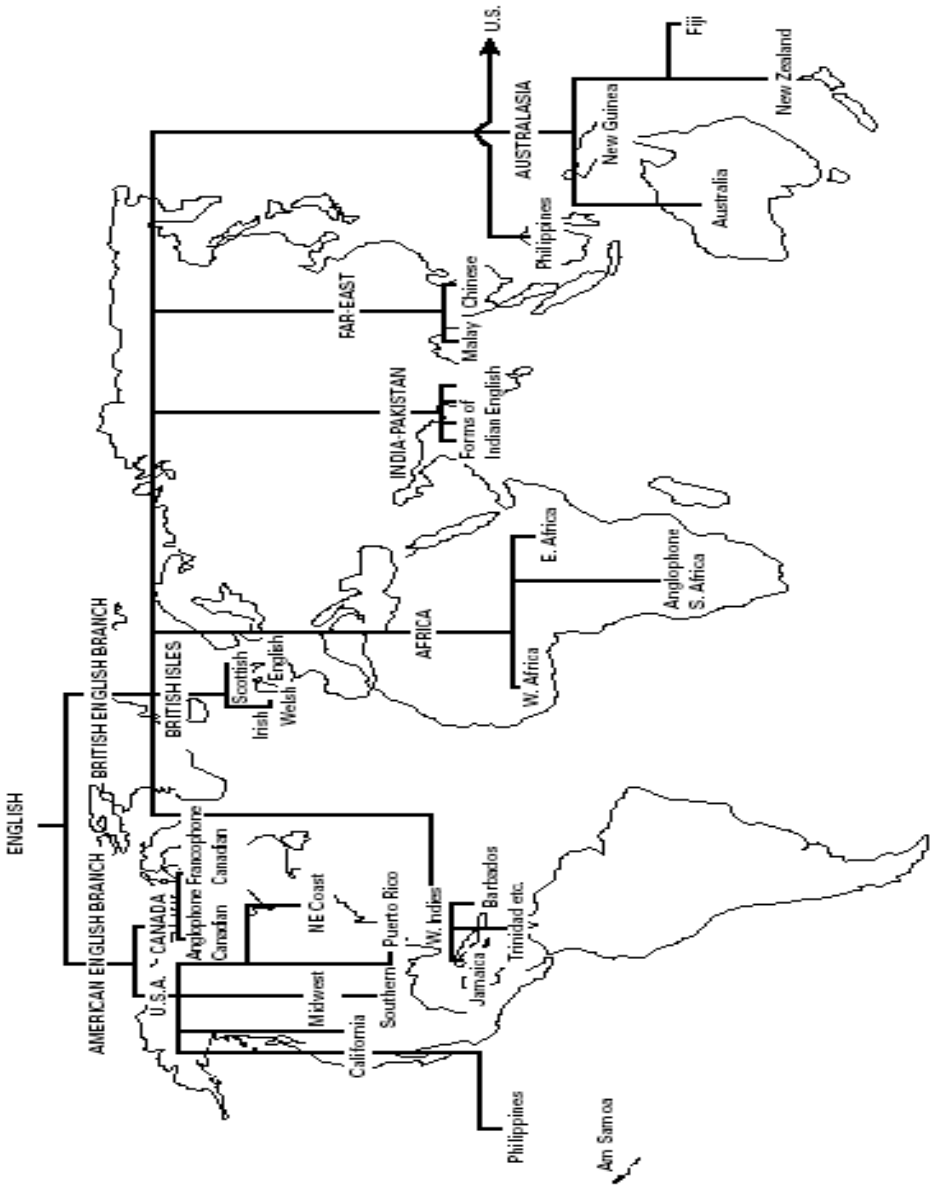

Figure 2.1 Strevens's world map of English

(Adapted from Strevens 1980: 86)

2.3.1.3 Mc Arthur (1987) and Gorlach Circle of World Englishes

McArthur (1987) proposed an alternative view of World Englishes. McArthur (1987) in his proposed model, entitled 'Circle of World Englishes' (see Figure 2.2 below), places at the centre "World Standard English". This centre according to him contains an internationally comprehensible variety, those features of the language that are common to all varieties of English which according to Jenkins 'does not exist in an identifiable form at present' (Jenkins, 2003:20). Unlike Strevens' world map of English, McArthur's model does not give a core position to any particular variety of English. As one moves away from the centre, the varieties become more localized, moving from national to localised varieties of English. However, this model does not help us in understanding what "World Standard English" stands for, and it does not account for what happens in contexts where English is used as a lingua franca between speakers who do not share a first language. Galloway and Nicollo (2015) also contend that while this is an organised attempt at exemplifying the world's English based on geographic location, it is not indicative of the true historic, political, and linguistic ties that exist in the varieties of English represented. For example, Philippines English has much more in common historically, politically, and linguistically with American English than to Chinese English, which is included in the same group. Also, the same could be said for the Hong Kong, which is much closer to British English, than to Japanese English.

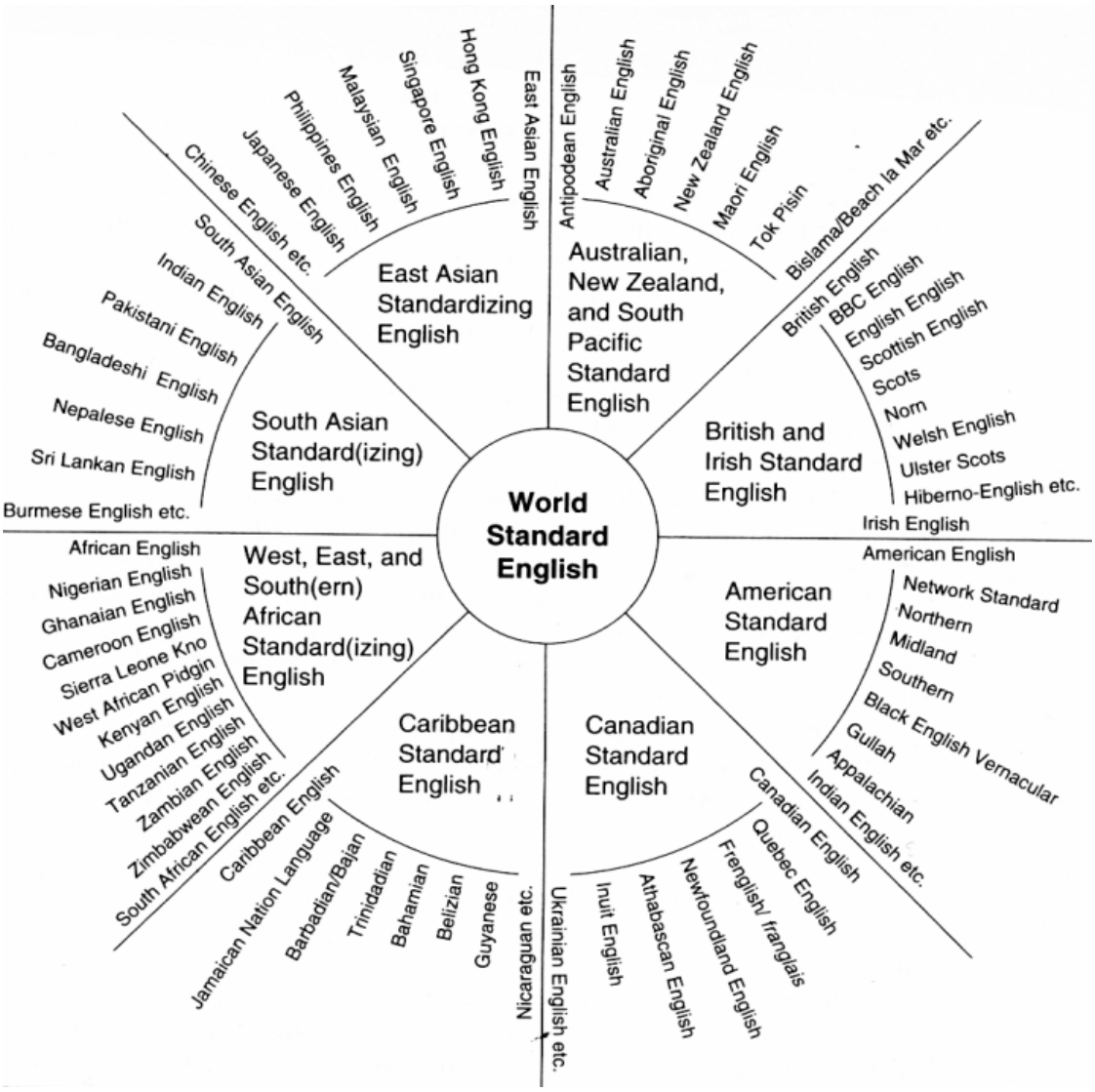

Figure: 2.2 McArthur's Circle of World English

(Adapted from McArthur 1987:11)

Gorlach's (1988) circle of English (see Figure 2.3) is related in a number of ways to McArthur's model. He moves from what he calls 'international English" (at the centre), to the most local varieties' (round the rim). It does include nonstandard or pidgin varieties. In contrast to McArthur, Görlach does not claim that the central English core, which he terms 'International English', is a "standard" form, and his circles are not indicating the distance from the centre as much as gradually

increasing detail about each regional family of varieties. Both models see English as a set of differing varieties, each with the potential for developing into a different language, but held together by the central hub of a common world English.

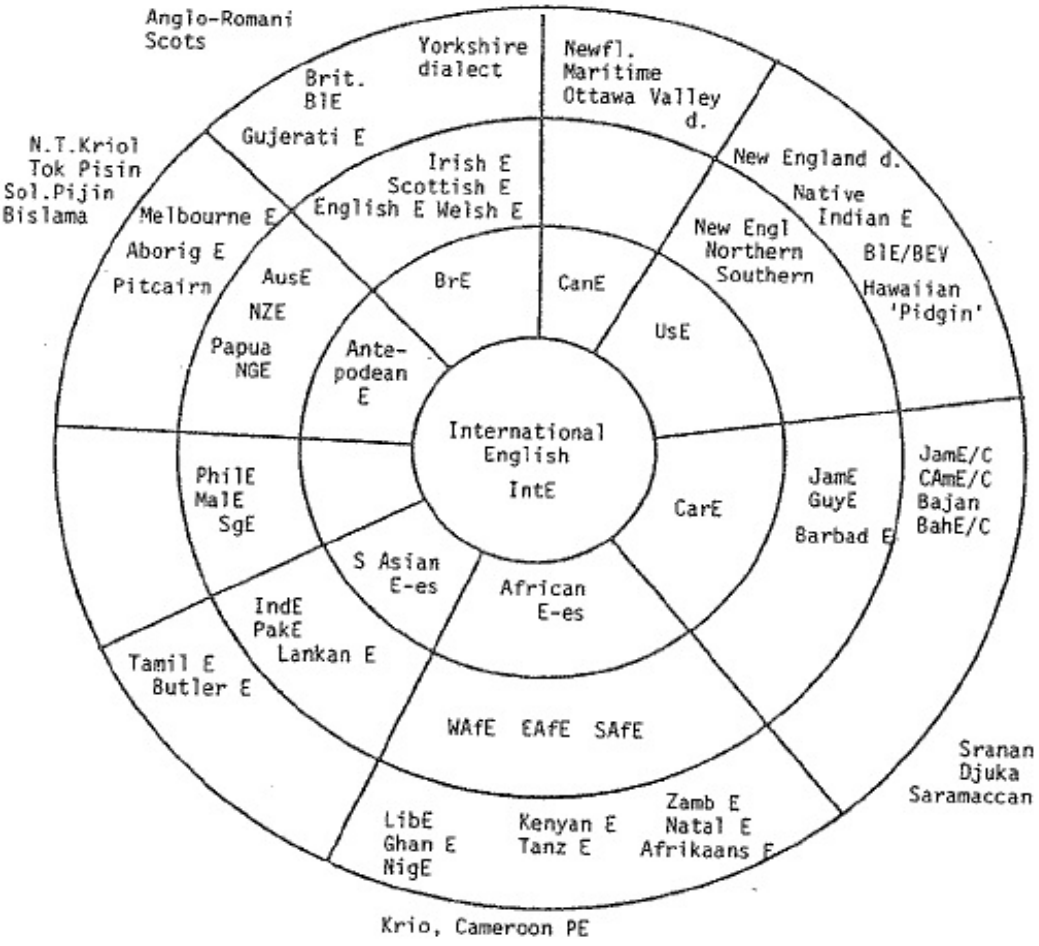

Figure 2.3 Gorlach's model of World English

(Adapted from Gorlach 1988)

2.3.1.4 Kachru's Three Circle Model of English

In Kachru's Three Circle Model, varieties of English are presented as three concentric circles (see Figure 2.4) and as overlapping circles in recent diagrams (see Figure 2.5) that are labelled "Inner Circle", "Outer Circle", and "Expanding Circle". This classification largely follows the three-way categorisation of ENL, ESL, and EFL speakers described in section 2.3.1.1. The three circles represent 'the types of spread, the patterns of acquisition and the functional domains in which English is used across cultures and languages" (Kachru, 1985:12).

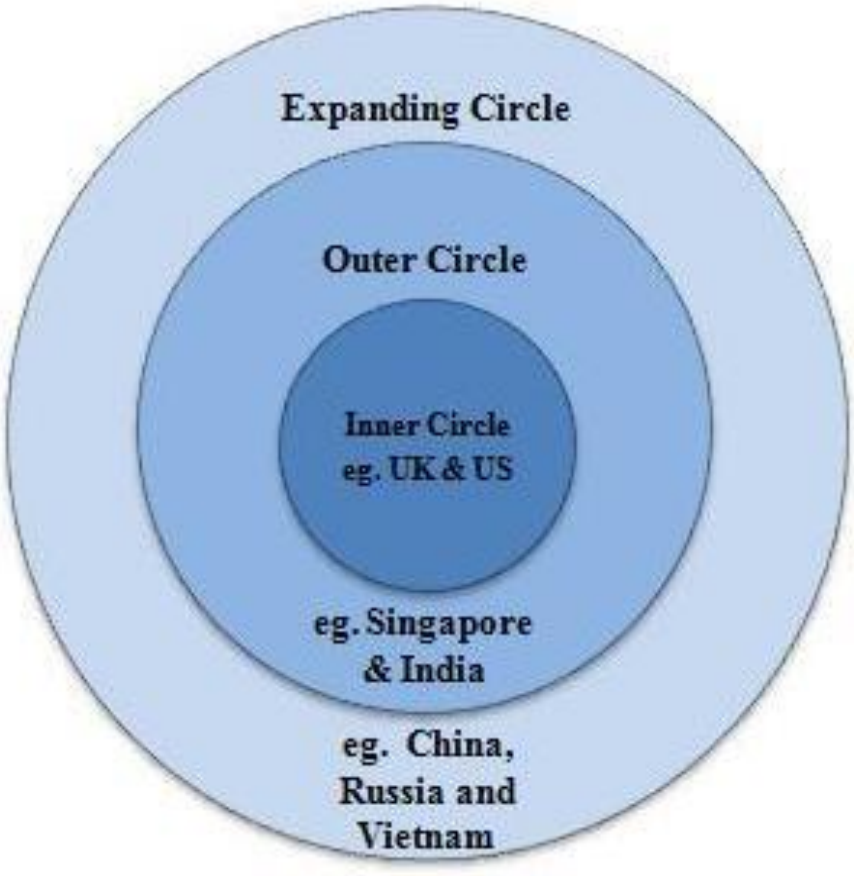

Figure 2.4 Kachru's three circle model of World Englishes

(Adapted from Kachru 1985 and 1992:356)

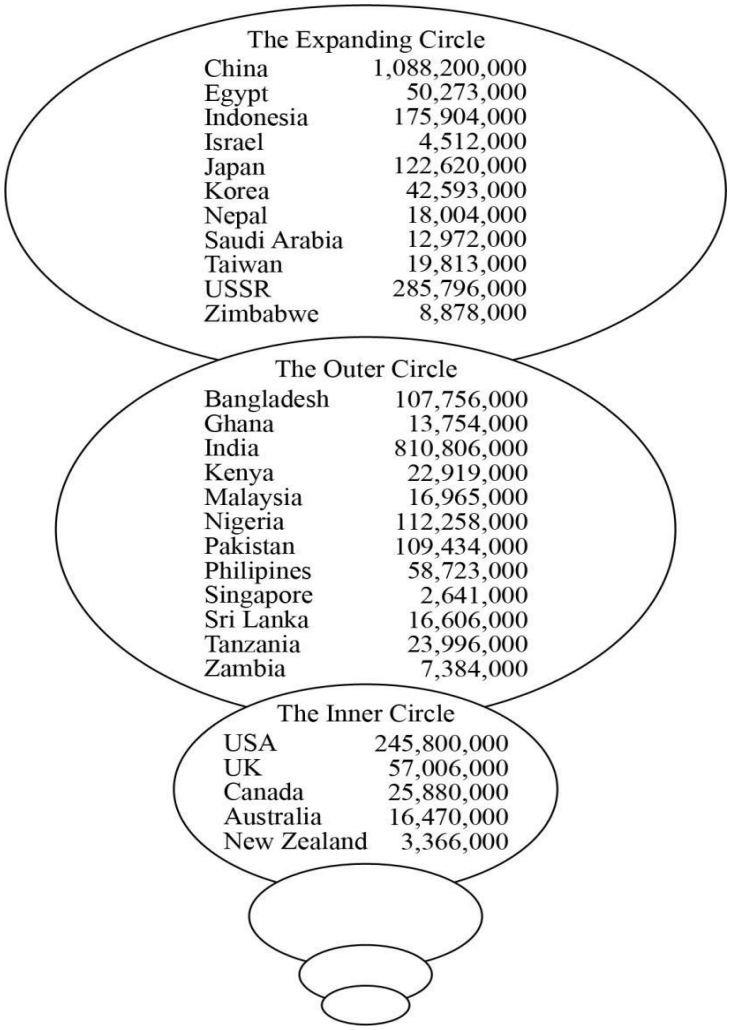

Figure 2.5 Kachru's three circle model of World Englishes

As shown in Figure 2.4 and 2.5, the first circle which is called "the Inner Circle" consists of the traditional English-speaking regions, where English had spread demographically through the immigration of English speaking peoples to these lands, and where English is the first or dominant language of its current populace. Inner Circle (IC) countries include among others the United States of America, Britain, Australia, Canada and New Zealand. The varieties of English used here are said to be "norm providing".

The “Outer Circle”, represents those regions where English has a colonial history and is spoken as a second language and primarily used in major institutions and in multilingual contexts. Most of the countries included in the Outer Circle are former colonies of the UK or the USA, such as Malaysia, and Singapore (Rajadurai, 2005).

Finally, the “Expanding Circle”, which is the third and the largest of the circles, includes countries where English has no official function nor does it have any administrative status in the society, as it is in the Outer Circle countries, but is used as an international and foreign language to communicate primarily with different speakers from other countries. The countries in the Expanding Circle include China, Japan, the USSR, Indonesia, Greece and South Korea (Crystal, 1997, Kachru 1992).

Kachru’s framework of three concentric circles has undoubtedly been helpful in providing an important basis for studying the nature and status of varieties of English around the world (Deterding 2003) and provided a description of different types of users, thereby contributing significantly to our understanding of the sociolinguistic realities of the spread of English. The model is used by World Englishes scholars to challenge the predominance of native English and the Inner Circle and to raise awareness of variations in English. However, in recent times it has been heavily criticised (Jenkins 2003, Bruthiaux 2003, Pennycook 2003a; 2006; 2009, Canagarajah 2006, Rajadurai, 2005; 2007, Park and Lee 2009, Saraceni 2010). Most of the criticisms suggest that the model does not clearly

state what it aims at categorising, as countries, language functions and types of varieties are all included in it (Bruthiaux 2003, Mollin 2006).

One of the criticisms put forward by Saraceni (2010:66) is the inability of the model to adequately represent 'change in the roles of English with respect to geographical location'. For example, today many countries in the Expanding circle (e.g. Norway, Denmark and the Netherlands) have many more English-speaking bilinguals than some countries in the Outer Circle where English has an official status, such as Gambia and Rwanda (McKay 2002). This suggests that there is a merging of the Outer and the Expanding Circle.

The model also conceals the fact that many inner circle/ENL territories are not homogeneous and are not "ENL only", strictly speaking (Galloway and Rose 2015; Bruthiaux 2003). For example, Canagarajah (2006a:590) notes that 'diaspora communities have brought their Englishes physically to the neighbourhoods and doorsteps of American families' and elsewhere in migrant communities around the world. Hence, the Inner Circle is not as homogenous as it seems.

A third problem is that there exists a range of practices that involve the local appropriation of English, most notably in the domain of popular culture, that are ignored in the model because they are often closely tied to the domain of artful performance compared to more codified varieties (Pennycook 2003a:521).

Additionally, critics (Jenkins, 2003, Radajuari, 2005, Saraceni 2010) have identified that one of the most problematic difficulties with this model is that it locates native speakers and native speaking countries (e.g. the United Kingdom and the United States) in the core of the circle (inner circle), thereby giving them a position of privilege. The term “inner circle” connotes the idea of “an exclusive club to which entry is dreamed of but rarely granted” (Saraceni, 2010), or “a select group” (Jenkins 2003a) that is in control of the larger speech community. By placing the countries that are historically linked to English in the centre and by centralising the “inner circle” reinforces and reproduces the dominant or hegemonic notion that sees these countries and native varieties as the ‘source of models of correctness, the best teachers and English speaking goods and services consumed by those in the periphery’ (Graddol 1997:10).

The model has been further criticized by Mollin (2006) who rightly observes that the model does not acknowledge one of the most essential functions of English today, namely that of a lingua franca between ‘all three circles, particularly within the Expanding Circle’ (Mollin, 2006:42).

In an attempt to address the shortcomings in Kachru’s three concentric circles, a number of alternative models have been proposed and some of these models will be discussed in the following sections.

2.3.1.5 Modiano’s Model of English

Modiano (1999) proposes the idea of centripetal circles (see Figure 2.6) which takes a mutual comprehension of the majority of proficient speakers of English

(native as well as non-native) as a basis for the classification of English as an international language (EIL) rather than on their historical and geographical origins as they are defined by the Kachruvian circles.

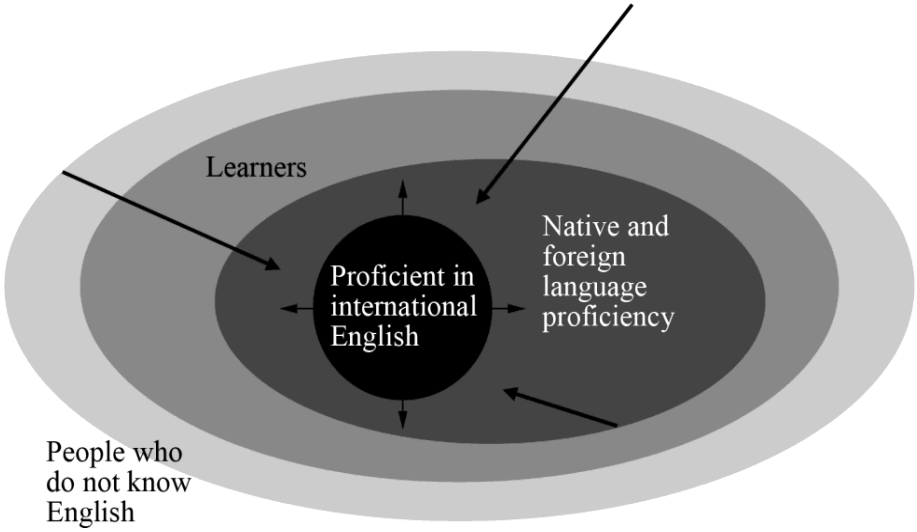

Figure: 2.6 Modiano's Centripetal Circles of International English

(Adapted from Modiano: 1999a:25).

From Modiano's point of view, the innermost circle is made up of speakers who are proficient in international English. He is not concerned with whether they are native or non-native speakers but whether they are excellent communicators in cross-cultural communication (global settings) where English is the lingua franca (ELF) or International Language (EIL). The other criterion apart from their excellent communicative abilities in international settings is that they have no strong or regional accent or dialect. The next circle, the circle immediately outside of the core as seen in the model consists of native and foreign language speakers who have attained varying degree of proficiency in one variety of English but who are incapable of switching to EIL when the context demands it. The third circle includes all those who are learning English, be it in a specific indigenized, regional

variety, dialect or standard varieties, and finally, the outermost group consist of people who do not speak any form of English at all (Modiano, 1999). Modiano's model is the one that manages to shift the attention from the notion of native speakers being in a "privileged group" or "core group" to a focus on the function of English as an international language. However, despite his contribution to the understanding of the use of English as an international language, his model is not without weakness. Jenkins questions the idea of classifying a strong or regional accent as not proficient in EIL. She questioned where to 'draw the line between a strong and non-strong regional accent'. Presumably, a strong regional accent places its owner in the second circle, thus categorising them as not proficient in international English. But there is no current basis on which to make the decision (Jenkins, 2009:22).

After carefully considering the criticisms of the model, Modiano reshaped his previous model and proposed the second one which is based on features of English common to all varieties of English (Modiano 1999b). As can be seen from his model below (Figure 2.7), the shaded central EIL area consists of a set of features which is comprehensible to almost all native and proficient non-native speakers of English. The central white area (second circle) comprises features whether internationally common or obscure. Finally, the outer area is made up of five groups of varieties namely, American English, British English, major varieties of English like Canadian; Australian; New Zealander and South African Englishes, other localised varieties of English like Nigerian English and Indian English, and foreign language speakers of English. This model basically differs from the previous model in that Modiano does not assign a core position to any

particular variety of English. However, the model does not answer the question of what goes into the core category (Jenkins 2015). Also equating “proficient non-native speakers” with “native speakers” mean that all native speakers of English are proficient users of English. This is not suitable because one’s proficiency in a language does not equate to native performance.

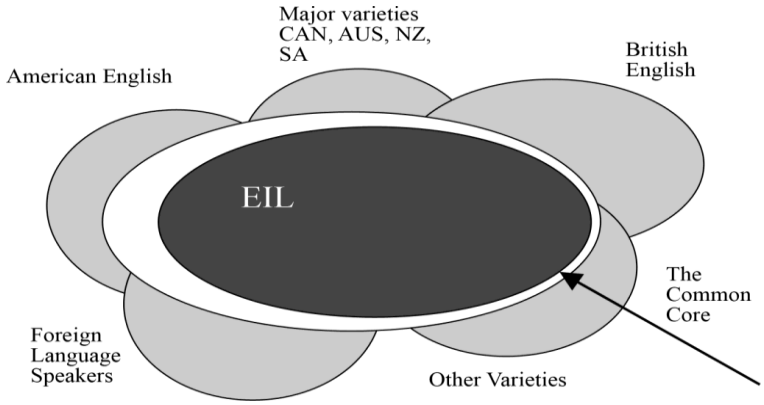

Figure: 2.7 Modiano’s English as an International Language (EIL)

(Adapted from Modiano, 1999b:10)

2.3.1.6 Yano’s Modification of Kachruvian’s Circle

Unlike Modiano, Yano (2001) suggests a slight modification to the Kachruvian model for two reasons. First, he proposes that Kachru’s model should be modified in order to take account of the fact that many varieties of English in the Outer Circle have become established varieties spoken by people who regard themselves as native speakers with native speaker intuition (Yano, 2001:122). The other reason is that with the tremendous influx of immigrants and the increase of foreign residents moving into Inner Circle countries, Inner Circle is increasingly exposed to World Englishes. To indicate the change, he used dotted

lines to denote the border between the Inner Circle and Outer Circle (see Figure 2.8). The borderline between the Inner Circle and the Outer Circle in Yano's point of view will eventually become more unclear and hence less significant with time, although that connecting the Outer Circle and the Expanding Circle will continue to be as distinct as it is now.

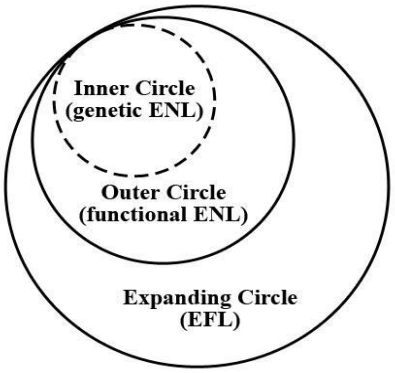

Figure: 2.8 Yano Yasukata's modification of Kachruvian's circles

(Adapted from Yano, 2001)

Yano goes on further to suggest a more different model for World Englishes. He suggests a three-dimensional parallel cylindrical model that allows for greater sociolinguistic coverage (see Figure 2.9).

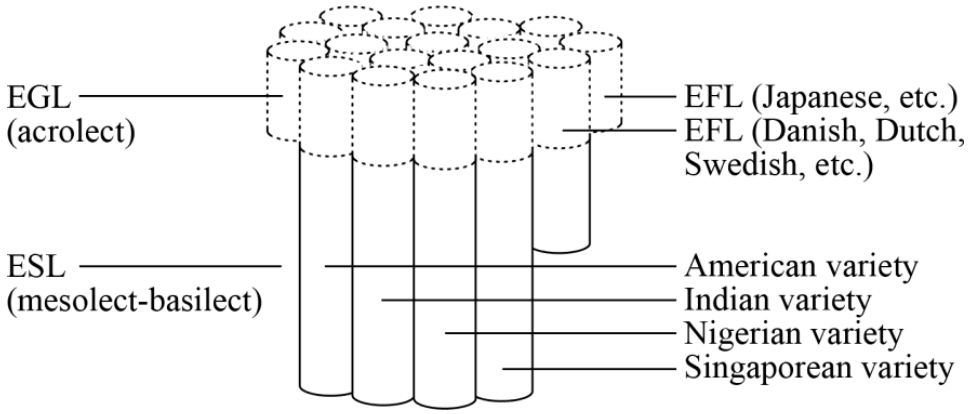

Figure: 2.9 Three-Dimensional Parallel Cylindrical Model of World Englishes

(Adapted from Yano, 2001)

In his model, he postulates that in every variety, there is a possible realisation of an acrolectal form which is used for international communication and formal usage and a basilectal form which is utilised for intranational communication and informal/colloquial usage.

However, Jenkins (2003b) questions the assumption made in this model that international communication utilises acrolectal forms and intranational communication utilises basilectal forms when it is very possible to use acrolectal forms in intranational and basilectal forms in international communications. There is also arbitrariness in the placement of varieties within the model which might make one assume relationships of proximity that might not exist and miss relationships that do exist. Due to the girth of the cylinders, it might be difficult to clearly represent large numbers of varieties that have full length cylinders. There is also an assumption that the point at which the acrolect changes into the mesolect exists at a unitary level in all varieties while in reality this does not seem particularly plausible due to variation in contexts or situations.

2.3.1.7 Graddol's Model

Graddol (2006) suggests a different way of classifying the users of English around the world. His model (see Figure 2.10) differs from previous models because it does not consider who the users of the language are (be it native or non-native) but rather focuses on English speakers based on their "proficiency" in the language. The ability of the model to move away from a narrower focus on the countries of origin and the concept of nativeness is one of the advantages of his model. However, while proficiency is taken into account, the model has not defined what proficiency is.

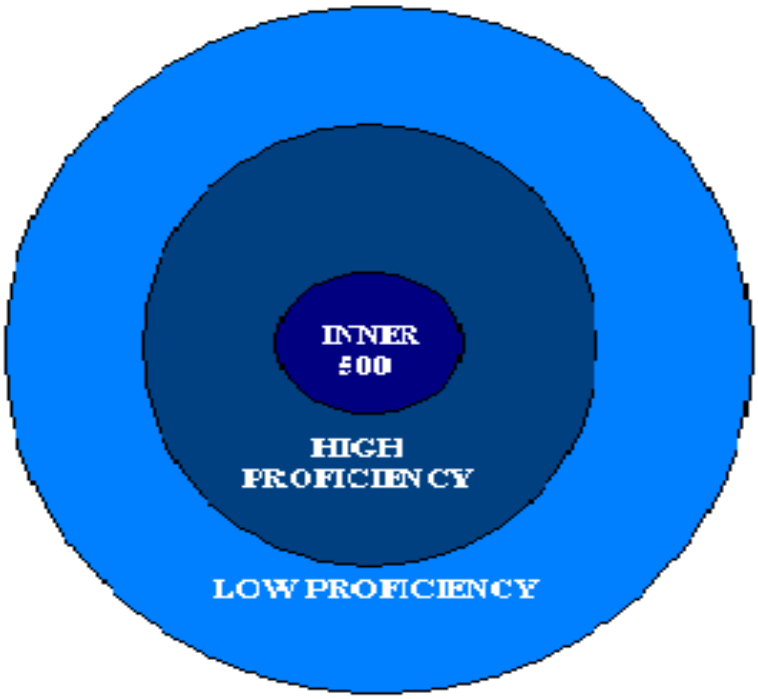

Figure 2.10 Graddol's model of English speakers

(Adapted from Graddol 2006:110)

2.3.1.8 Schneider's Dynamic Model

A more recent but also widely applied approach towards varieties of English is Schneider's (2007) Dynamic model of the evolution of Postcolonial Englishes (PCEs). Compared to the older approaches in the field, the dynamic model, often called Postcolonial English (PCE), is much more diachronic in orientation and proposes that 'there is a shared underlying process which drives the formation of New Englishes, accounts for many similarities between them, and appears to operate whenever a language is transplanted' (2007:29). He further explains:

> Fundamentally, the evolution of PCEs [postcolonial Englishes] is understood as a sequence of characteristic stages of identity rewritings and associated linguistic changes affecting the parties involved in a colonial-contact setting. Ultimately, the force behind this process is the reconstruction of the group identities as to who constitute "us" and "other" by both settlers and indigenous residents in a given territory, reflected by associated sociolinguistic and linguistic processes (Schneider, 2007:29).

The PCE model looks at English in each community through its life cycle from the foundation of the community through some form of colonial presence through its development as a stable differentiated variety. According to Schneider (2003, 2007), this development [the evolution of new Englishes] usually proceeds along five major stages namely: (1) foundation, (2) exonormative stabilization, (3) nativization, (4) endonormative stabilization, and (5) differentiation as shown in Figure 2.11.

Figure 2.11 Dynamic Model of Postcolonial English (DM-PCE)

(Adapted from Schneider 2007)

The Dynamic model of postcolonial English presents an interesting perspective of looking at English. By making the point of differentiating varieties by their stage of development, the various sociolinguistics aspects of the language as used in various communities may be investigated with reference to their particular contemporary requirements in the stages of development. However, two problems present themselves. Firstly, the model is designed to accommodate the development of all varieties of English that can be traced back to a colonial situation. This means the model applies to Outer Circle, and Inner Circle groups but those in the Expanding Circle are not necessarily covered by the model. For example, Scandinavian countries and some countries like Thailand and Netherlands have no British colonial background or history, but the English language is much more significant there than in other EFL countries and some other countries in the Outer circle like Pakistan and Bangladesh (Buschfeld et al. 2014). Secondly, there is the idea of evolution, which has the implication that some varieties are more evolved than, and thus superior to, other varieties.

Having discussed the World Englishes paradigm, I now move on, in the final part of the chapter, to examine the next paradigm which is English as a lingua franca.

2.3.2 English as a Lingua Franca (ELF) Paradigm

As was seen in the previous section, the WE paradigm/research has explored how English spread beyond its' native-speaker settings and how non-native speaker Englishes have developed in their own right to express the local

societies, cultures, conventions and identities of speakers (Low and Pakir 2017). WE research has mainly focused on postcolonial Englishes and on non-native speaker varieties which are institutionalised and linguistically identifiable and geographically definable (Kachru, 1992:66). Fundamentally, the WE school of thought seeks to decentralise the concept of "English" and to provide representations of it alternative to the Anglocentric model (Saraceni 2010:82).

As globalisation progresses however, international and cross-cultural communication among English speakers who do not share mother tongues has increased at an unprecedented speed and volume (Low and Pakir 2017). In such communicative encounters, speakers inevitably transfer features of their local languages and home cultures into English and this makes it necessary for them to constantly modify their linguistic and interactional strategies in different settings in order to construct commonalities to facilitate mutual intelligibility (Jenkins 2000; 2006; 2007; 2009; Bjorkman, 2013; Low and Pakir 2017).

The term English as a Lingua Franca (ELF) has been in wider use since 1995 (Jenkins, 1995). However, it has only been widely adopted as a formal term to describe English as it occurs in international settings since 2000, partly because of Babara Seidlhofer's (2000) paper titled "The Conceptual Gap". One may note that although one of the most prominent figures in this field of study, Jennifer Jenkins in her year 2000 publication used the term "English as an international language (EIL)", she only adopted the term "ELF" more widely in subsequent publications (e.g. Jenkins, 2005). She explained her preference for the term ELF over EIL:

> ELF emphasizes the role of English in communication between speakers from different L1s, i.e., the primary reason for learning English today; it suggests the idea of community as opposed to alienness; it emphasizes that people have something in common rather than their differences; it implies that 'mixing' languages is acceptable… and thus that there is nothing inherently wrong in retaining certain characteristics of the L1, such as accent; finally, the Latin name symbolically removes the ownership of English from the Anglos both to no one and, in effect, to everyone. (Jenkins, 2000:11)

In her support for ELF over EIL, Seidlhofer (2004) added that ELF 'best signals that it is those non-native users that provide the strongest momentum for the development of the language in its global uses as "agents of language change"' (ibid: 212).

As can be seen in the above discussion of terms, one of the first issues that arises in discussing ELF is whether native English speakers are included. Jenkins (2007) defined a lingua franca as 'a contact language used for communication among people who do not share a first language' (2007: 1). Using the above definition, ELF technically then excludes speakers who use English as their first language. Some ELF scholars like Firth (1996) or House, (2002) adopt this view that ELF interactions exclude native speakers. However, others, such as Mckay (2002 cited in Ling Low 2010) use EIL to talk about interactions between non-native speakers while Llurda (2004) uses EIL to refer to both native speaker/non-native speaker (NS-NNS) and non-native speaker/non-native speaker (NNS-NNS) only communications. According to Seidlhofer (2004), "ELF interactions often also include interlocutors from the Inner and Outer Circles"; however, the "nativeness criterion" does not apply to the concept of ELF (pp. 211-212).

Jenkins' own position resonates with Seidlhofer (2004) where ELF should not exclude interactions that non-native speakers may have with Inner Circle speakers. However, she believes that research into ELF should exclude communications with native speakers in order to investigate emerging trends and norms in ELF without the influence of native speaker data. If native speaker interaction is unavoidable, then the data should not be representative of an English "reference point" (Jenkins, 2007:3).

English is used as a lingua franca in business meetings, giving lectures, attending international meetings, sports activities, academic presentations, service transaction to casual chat and small talk in a language that is neither their L1 nor the L1 of most of their interlocutors (Cogo, 2010). Whether you are an English tourist bargaining in the Meena Bazaar of Dubai, a Chinese business professional on a business trip in South Africa, a graduate student in a multilingual classroom in London, a pilot of an Australian airplane landing in Toronto, or a Nigerian lecturer presenting your latest research in Poland, you probably speak some English. A typical English as a Lingua Franca context would be an international conference and business setting. For example, an Academic, who goes to a conference in Italy to present his or her work in spoken form might meet Italians, Americans, Sardinians, French, Greeks, Brazilians, Chinese, Taiwanese, Japanese and other people from 20 nationalities at such a conference. On another occasion, video conferencing or a business meeting may put the same people in contact with Peruvians, Chileans, Danes, Germans, Hungarian, Latvians, Portuguese and many others. The language all these people would be using is English. They would be mixing different L1 resources,

different types of English in order to produce what is the hybrid multilingual fluid type of language use. In this scenario, international intelligibility will be the crucial thing to aim for.

2.4 Chapter Summary

The chapter has outlined the spread of English from the British Isles to the global lingua franca it is today. I have shown that the one consistent element of English over time is that it is not a monolithic entity, but one that adapts and changes according to its surroundings. English has changed dramatically over the last ten centuries, since its emergence. The first part of the chapter investigated the more recent history of English's emergence from British imperial influences to becoming the world's foremost language and a global lingua franca. With the historical forces' mercantilism and the recent driving force of globalisation, English language has reached a position where it is spoken as a native or second language by more than 700 million people and is a lingua franca to more than one billion (Crystal, 2003; Galloway and Rose, 2010). Non-native speakers now outnumber native speakers, which has extraordinary implications for the ownership and teaching of English.

The second part of the chapter examined the models or frameworks put forward to explain the global spread of English. It focused on the more relevant paradigms often mentioned in relation to English as an international language (WE and ELF).

In the chapter that follows, I present a comprehensive description of the contextual background to Nigerian English.

Chapter Three
Nigerian Linguistic Context

3.0 Introduction

This chapter presents a detailed description of the contextual background to Nigerian English. I start with a discussion of the general linguistic situation of Nigeria, which is viewed by many scholars as one of the most complex linguistic situations in the African continent (Ibekwe 2006). In Nigeria today, according to the 17th edition of the Ethnologue[7] report for Nigeria[8], there are about 522 languages co-existing with one another. It is interesting to note that apart from the many indigenous languages, which are of course the mother tongues of Nigeria, exogenous languages such as English, French and Arabic also exist. English has become a second language and the main official language in Nigeria due to its status and the role it performs in the country. Of the more than 500 languages spoken in Nigeria, only three so-called primary languages: Hausa, Yoruba, and Igbo are accorded recognition as indigenous national languages while the remaining languages are seen as "minority" languages (Ayeomoni; 2012). However, for the purpose of this study, I will pay particular attention to Yoruba language, given that it is the mother tongue of the Nigerian English speakers that spoke in the audio podcasts or recordings used in the present investigation.

[7] a database of language resources
[8] (see http://www.ethnologue.com/17/country/NG/)

Major emphasis is placed on Yoruba in this chapter because understanding the L1 knowledge of the speakers (that presented the recordings) would explain some of the phonological transfer of the speakers L1 into English. It is also important in gaining an understanding of the difficulties speakers encountered in pronouncing English sounds which in the course of the thesis underpins some of the discussions in my analysis chapter.

The next section further discusses English in the Nigerian context. In this section, I start with a history of English in the country, followed by a discussion of its role and status. Next, I provide a description of Nigerian English at different linguistic levels, placing emphasis on the phonological level in which the variation is noticeable and the focus of this study. Describing the phonological features of Nigerian English enables an understanding of the type of English spoken by the group of speakers that provided the spoken data in the current study.

3.1 The Linguistic Situation in Nigeria

3.1.1 Nigeria: A Brief Profile

Nigeria is a nation in the western part of Africa, bordered to the north by Niger, to the east by Cameroon, to the west by Benin, while to the south it rests on the shore of the Bight of Benin and Biafra on the Gulf of Guinea in the Atlantic Ocean (Adedeji, 2010). According to the United Nations report (2015), the population stands at 182 million making Nigeria the most populous African country and the seventh most populous country in the world. The country is divided into thirty-six states and the federal capital territory (Abuja) is the seat of government. Lagos is the former capital and Nigeria's largest city.

3.1.2 Nigeria: The Indigenous Languages

Nigeria is a multi-ethnic, multi-cultural and multilingual society with many ethnic groups and languages (Omodiagbe 1992). The exact number of indigenous languages spoken in Nigeria is impossible to ascertain because adequate information is not available about many of them (Ayeomoni 2012). However, there have been various views and opinions about it, for instance, Bamgbose (1971) and Hansford et al., (1976) put the number at about 400 (Adegbija 1991a; 1989). Some scholars (Omodiagbe 1992; Adegbite 2010; Danladi, 2013) put the number between 450 and 500 languages. The most recent estimate by the 17th edition of Ethnologue is 522 living languages. To further complicate this multilingual situation, most of the languages have different identifiable dialects (Akande &Salami, 2010). This multilingual situation has made the concept of mutual intelligibility among Nigerians an important area of research. It would be a mistake to simply assume that communication across cultures in English would be straightforward given the vast number of L1s found within those cultures. Of the over 450 languages spoken in Nigeria, only three are accorded recognition as indigenous national or major languages. These are Hausa, Yoruba, (the mother tongues of the Nigerian listeners that participated in this study) and Igbo predominately located in the North, South West and South East of Nigeria respectively. The most widely spoken indigenous language is Hausa. This is followed closely by Yoruba and then Igbo. Regarding the geographical locations and proportions of major ethnicities, the Hausa located in the Northern region accounts for roughly 29 per cent of the population, the Yoruba located in the southwestern part of the country make up 21 per cent, and the Igbo of the south-east make up 18 per cent (Danladi, 2013).

The other ethnic groups according to Ibekwe (2006) constitute a different degree of “minority” status, as they can further be categorized into ‘large minorities” and “small minorities’. Danladi, (2013) defines belonging to the “majority” of language groups to mean “reasonably having both economic and political prestige” while belonging to “minority” groups of language connotes ‘a situation of a weak power status high of socioeconomic and political power status of delivery and resource control’ (Danladi, 2013:5). Otite, (1990) classifies the minority groups into “large minorities” with millions of members (such as Ijaw, Nupe, Kanuri, Edo, Fulfude, Efik and Ibiobio, Urhobo, and Tiv) and the lower minorities with thousands of speakers (such as Ogoni, Isoko, Izon, Itsekiri, Ibuno, Ewe). Below is a map showing the linguistic situation in Nigeria.

The Map of Nigeria showing major linguistic groups

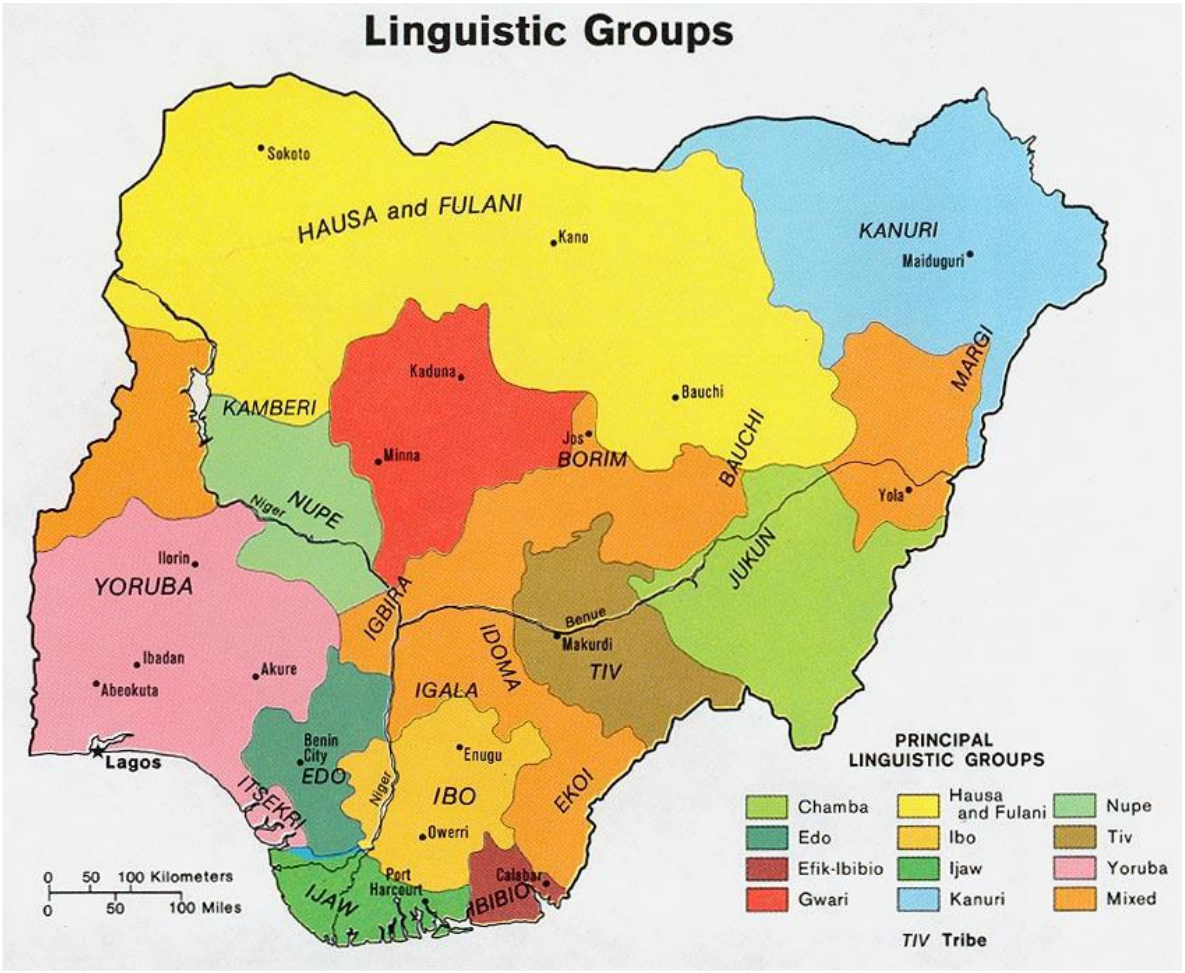

Figure: 3.1 Map of Nigeria Source: (New World Encyclopaedia)

Jibril Munzali (1991) has classified the population of the largest languages groups as follows:

Table 3.1. Population of Speakers of the 12 Largest Language Groups

Language	1963 Population	1986 Population
Hausa	11, 653,000	23,233,000
Yoruba	11,321,000	22,571,000
Igbo	9,321,000	18,434,000
Fulfulde	4,784,000	9,538,000
Kanuri	2,256,000	4,498,000
Ibibio	2,006,000	3,999,000
Tiv	1,394,000	2,779,000
Ijaw	1,089,000	2,171,000
Edo	955,000	1,904,000
Nupe	656,000	1,314,000
Urhobo	639,000	1,274,000
Igala	582,000	1,160,000

Source: Adapted from Jibril, Munzali (1999:111)

The above table, based on the 1963 and 1986 census, gives an idea of the 12 largest ethnic/language grouping in Nigeria. The three indigenous majority groups made up about 54 per cent of the population in 1986. The rest of the over 400 languages constitute the remaining 46% (Ibekwe, 2006; Danladi; 2013). The three official languages (Hausa, Yoruba, and Igbo) are important because of their wide use as second languages of inter-ethnic and co-official status (Ibekwe, 2006; Danladi; 2013).

As mentioned earlier, Yoruba is discussed in the next subsection because it is the mother tongue of the Nigerian English speakers that provided the recordings used in this present investigation. In this sub-section, I discuss Yoruba's phonemic systems and highlight the main differences from the phonology of English. As mentioned previously, having background knowledge of Yoruba and its phonological system is essential in gaining an understanding of the difficulties speakers encountered in pronouncing English sounds which in the course of the thesis underpins some of the discussions in my analysis chapter.

3.1.2.1 The Yoruba Linguistic Profile

The Yoruba language is classified among the Kwa language subgroup of the Niger-Congo family. The Kwa sub-group is distributed within the West African sub-region, and within Nigeria, it includes languages like Yoruba, Itshekiri, Igala, Edo, Urhobo, Igbo, Igbira among others (Isichei, 1983:7). As pointed out earlier, Yoruba is one of the three primary languages of Nigeria, and it is spoken mainly in the southwestern part of Nigeria as a first language. Most of the Nigerian population who use Yoruba as their mother tongue are located in Lagos, Oyo,

Ogun, Osun, Ondo, Ekiti, and in some parts of Kwara, Kogi, and Edo states. Several more people speak the language as a second or third language in other parts of Nigeria (Ayeomoni, 2011). Also, speakers of the language are found in many regions of the world. In fact, while the vast majority of Yorùbás live in south-western Nigeria, there are also varieties of Yorùbás found in several African, countries such as Republic of Benin, Sierra Leone, and Togo (Fakoya, 2007). Yorùbás are found among communities in Brazil, Cuba, Trinidad and Tobago, the United Kingdom and USA (Fakoya, 2007). Adewole (2007) points out that although Yoruba is one of the minority languages in the United States of America, there are more universities in the United States (16) that study the language compared to Nigeria (10). This demonstrates how significant the language is.

Among the Yoruba speakers in Nigeria and the West African sub-region, there is a standard way of speaking the language that is understandable and intelligible to all speakers. The Yoruba language has been classified into three major dialect groups: North-West Yoruba (NWY); (i.e. Abeokuta, Lagos areas, Ibadan, Oyo, Egba, Ibolo and Moba), South-East Yoruba (SEY) (Ondo, Owo, Okitipupa: Ikale, Ilaje, and parts of Ijebu) and Central Yoruba (CY) (Ife, Ijesa, Irun, Ifaki and Ekiti) (Adetugbo, 1967; 1973; 1982; Mosadomi, 2005; Ibekwe, 2006). Of all these dialect groups, the North Western Yoruba (NWY) has been chosen as the Standard Yoruba because of its 'uniformity and wide use in schools, textbooks, and the media' (Mosadomi, 2005:231).

Having established this background, the study will introduce the phonology of Yoruba language in the next section, paying attention to how it differs from the

phonology of standard British English. The section has been divided into three: the vowel system, consonant system and syllabic structure of Yoruba.

3.2. The Phonology of Yoruba

3.2.1 The Vowel System

There are two vowel types in Yoruba; oral and nasalized. There are seven oral vowels: [i], [e], [ɛ], [a], [o] [ɔ], and [u]; while there are five nasal vowels [ĩ], [ɛ̃], [ã], [ɔ̃], and [ũ] (Greenberg 1963; Akinlabi 2004) or four [ĩ], [ɛ̃], [ɔ̃], and [ũ] (Bamgbose 1969)[9] in Yoruba. By oral, we mean that air escapes from the mouth (rather than from the nose) when the vowel is produced. While nasal vowels are produced by lowering the soft palate so that air escapes from the nose as well as from the mouth when the word is pronounced. The seven oral vowels are shown in the following examples and represented on a phonetic vowel chart given in Figure 3.2.

Phoneme	Orthography	Examples
[a]	a	ba´ (meet) ka´ (fold) a ja´ (dog)
[e]	e	ke´ (shout) ewe´ (leaf) ètè (lips)
[ɛ]	ẹ	bẹ (forward) ẹ jẹ (blood) kẹ (pet)
[i]	i	ki (greet) ìdí (buttocks) `irì (dew)

[9] Bamgbose pointed out that the nasalized vowel [ɔ̃] is substituted with [ã] by some speakers, while some speakers use both sounds under certain phonetic conditions: namely, [ɔ̃] after labials and [ã] elsewhere (ibid 1969:167).

[o]	i	lo (go) òdo (zero) owó (money)
[ɔ]	ọ	kọ (teach) ọwo (respect) ọ pọ lọ pọ (plenty)
[u]	u	ku´ (die) ojú (eye) òwú (thread)

Table 3.2

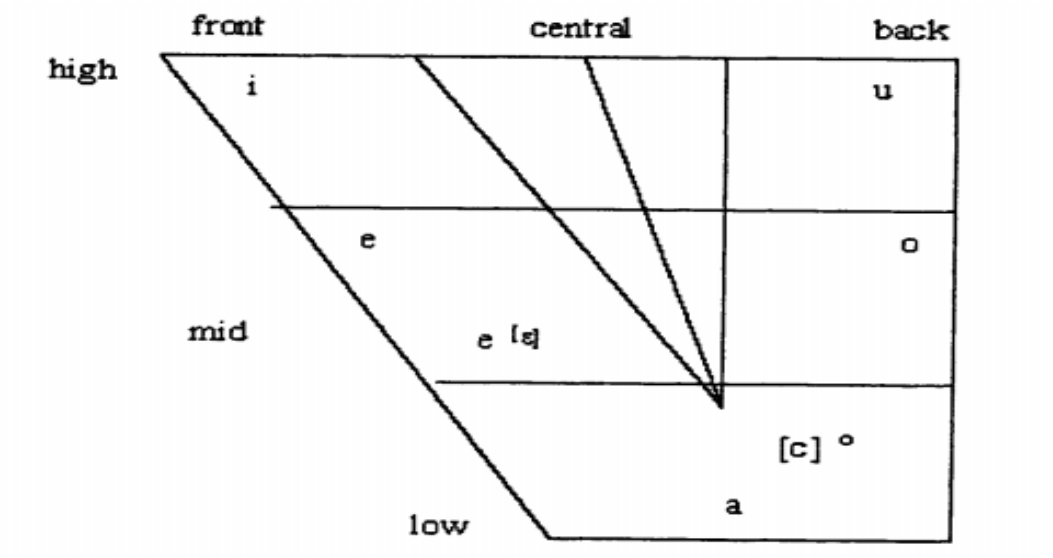

Figure: 3.2. The Yoruba vowel chart (adapted from Akinlabi 2004:454)

Orthographically, nasalized vowels are represented by an oral vowel symbol followed by “n”, i.e. in, un, en, ọ, except in cases where the [n] allophone of /l/ precedes a nasal vowel, i.e. [inú] “inside, belly” is written [inú] instead of inún. The following examples illustrate the five nasal vowels of Yoruba:

Phoneme	Orthographically	Examples
[ĩ]	in	ikìn (palm nuts) òrin (song) dín (to fry)
[ɛ̃]	ẹn	Ìyen (that one) ìwònyen (those) yen (that)
[ũ]	un	ikun (a type of squirrel)

		ogún (twenty) dún (to sound)
[ɔ̃]	ọn	Ìbon (gun) gbòn (to shake off) ogbòn (thirty)
[ã]	an	òsán (afternoon) ìran (heritage) tàn (to deceive)

Table 3.3: Adapted from Akinlabi (2004).

From the Yoruba vowel chart in figure 3.2 and table 3.2, it can be seen that there are no diphthongs and triphthongs in Yoruba (Awobuluyi, 1979); sequences of vowels are usually pronounced as separate syllables. There is also a noticeable absence of central vowels /ə/ /ɜ/ and /ʌ/ in Yoruba vowel inventory. Compared to RP, the distinction between tense and lax vowels is not maintained (Awonusi, 2004; 2009).

3.2.2 The Consonant System

The classification of Yoruba consonants is given in figure 3.3 below:

	Bi labial	Labio dental	Alveolar	Post-alveolar	Palatal	Velar	Labio Velar	Glottal
Plosive	b		t, d		ɟ	k, g	kp, gb	
Fricative		f	s	ʃ				h
Nasal	m		n					
Approximants			r		j		w	
Lateral			l					

Figure 3.3. The consonants of Yoruba

(Adapted from Akinlabi, 2004:457)

Table 3.4. Classifying the Yoruba consonants segments according to the place of articulation, the following examples show words in which the consonant occur.

Phoneme	Orthography	Example(s)	
[b]	b	[bí] a bà	“to give birth”. “hut”.
[m]	m	[mu] [a mò]	“to drink.” “clay”.
[t]	t	[a ta] tà	“pepper”. “to sell”.
[d]	d	[dá] à dá	“to break”. “cutlass”.
[f]	f	[fà] [fun]	“to pull”. “give”.
[s]	s	[sọ] [a sò]	“say”. “cloth”.
[n]	n	[ná] [à na]	“to bargain”. “in law”.
[l]	l	[à lá] [lá]	“dream”. “to lick”.
[r]	r	[a ra] [rà]	“body”. “to buy.”
[ɟ]	j	[a já] [jà]	“dog”. “fight”.
[kp]	p	pa [pò]	“kill”. “to mix”.
[gb]	gb	[gbà] [gba]	“take”. “sweep”.
[k]	k	[kò] [kà]	“refuse”. “to read”.
[g]	g	[i gi] [gà]	“tree”. “spread”.
[j]	y	[a ya] [yá]	“wife”. “borrow”.
[w]	w	[wá] ìwà	“come”. “character”.
[ʃ]	s	[o ʃù] [à ʃà]	“month”. “custom”
[h]	h	[a hoń] [i hò]	“tongue” “a hole”

There are major differences between the above classifications and those that exist in some of the literature[10]. Firstly, the voiced palatal plosive /ɟ/ is sometimes classified as an affricate [dʒ]. Bamgbose[11] argues that there is a variation among speakers between producing a plosive and producing an affricate, so both classifications are correct (Akinlabi, 2004). Also, the /j/ is an approximant and is sometimes classified as a voiced palatal fricative sound. The other difference between this classification and those in the earlier studies is that [h] as a glottal fricative is classified as a glottal approximant[12].

Some Yoruba consonants have two variants, depending on context. First, Yoruba sonorant consonants are pronounced as oral /l, r, w,y,h/ before oral vowels, and as nasal [ñ, r̃, w̃, ỹ, h̃] before nasal vowels.[13] Second, when the nasal /n/ is syllabic (i.e., when it constitutes a syllable by itself), it has six variants whose points of articulation are based on the points of articulation of the next consonant. Therefore, it is pronounced as bilabial [m] when next to /b,m/, as a labiodental [m] before /f/, an alveolar [n] before /t, d,s,n,r, l/, a palatal [ɲ] before /ʃ, ɟ, y/, a velar [ŋ] before the consonants /k, g,w,h/ and the vowel /o/, and a labiovelar [nm] before /kp,gb/. The following examples illustrate some of the variants. The syllabic nasal is in bold form in the following examples. The words are given in Yoruba orthographic in the rightmost column.

[10] See Bamgbose, A. (1969), 'Yoruba' in *Twelve Nigerian Languages*, Dunstan E (ed). New York: Africana Publishing corporation

[11] See Bamgbose, A. (1966), *Grammar of Yoruba*. London: Cambridge university Press

[12] See Akinlabi, A (1991), "Supraglottal deletion in Yoruba glides," Proceedings of the West Coast Conference on Formal Linguistics 10, pp. 13-26, for more details.

[13] See Akinlabi, A (2004) "The Sound System of Yoruba". In Understanding Yoruba Life and Culture, Nike S Lawal. Matthew, N.O Sadiku, and Ade Dopamu, eds. Trenton, NJ: Africa World Press. Pp 453-468 for more details, and Oyelaran, O.O (1971) Yoruba Phonology (Ph.D. Dissertation, Stanford University, Stanford)

[òrom̀bò]	lemon	òrom̀bò
[bóḿfò]	short skirt	bóḿfò
[pañla]	stock fish	pañla
[ògòŋgò]	ostrich	ògòngò

A comparative chart of Yoruba consonantal sounds and RP sounds is shown in the table given below:

Sound	**Received Pronunciation**	**Yoruba**
p	✓	×
b	✓	✓
t	✓	✓
d	✓	✓
k	✓	✓
g	✓	✓
tʃ	✓	×
dʒ	✓	✓
f	✓	✓
v	✓	×
θ	✓	×
ð	✓	×
s	✓	✓
z	✓	×
ʒ	✓	×
ʃ	✓	✓
h	✓	✓
m	✓	✓
n	✓	✓
ŋ	✓	✓allophonic
r	✓	✓
w	✓	✓
j	✓	✓
l	✓	✓

Table 3.5- A Comparative Chart of RP vs Yoruba Language

Source: Adapted from Jibril (1982)

From this table, it is obvious that Yoruba language lacks the dental fricatives /θ/, /ð/; voiced labio-dental fricative /v/, the voiced alveolar fricatives /z/, voiced palatal fricative /ʒ/, voiceless palatal affricates /tʃ/, and voiceless plosives /p/. Nasal [ŋ] is not a separate phoneme, but an allophone of /m/.

3.2.3 The Syllable Structure

Yoruba is characterized as a syllable-timed language (Tiffen, 1974; Dairo, 1998; Akinlabi, 2001; 2004). In other words, the syllables are said to occur at approximately regular intervals of time and the amount of time it takes to say a sentence depends on the number of syllables in the sentence, not on the number of stressed syllables as in English, a stress-timed language. The three possible syllable types in Yoruba are V, CV and N. There are no consonant-final words, and therefore, there are no closed syllables in the language (Tiffen, 1974; Dairo, 1998; Orie Ola; Akinlabi, 2004). All the three syllables types have either the nucleus only (the first and last type), or they have an onset and a nucleus only (as in the second type). Moreover, Yoruba does not permit consonant clusters within a syllable (Akinlabi, 2001; 2004). Thus it is impossible to have a combination like /krim/ (the pronunciation of the English word “cream”), which has the cluster /kr/ at the beginning, or /sɪlk/ (the pronunciation of the English “silk”) which has the cluster lk at the end (Akinlabi, 2001). The following examples illustrate the three syllable types in Yoruba. The syllable is in bold form, and a hyphen separates each syllable in the following examples. The words are given in Yoruba orthographic in the first column.

- V: àdá [**à**-dá] “cutlass”
- CV: kà [**kà**] “read”
- N: òrom̀bò [ò-ro-**m̀**-bò] “lemon”

Finally, Yoruba is a tonal language in which every syllable bears one of the three level tones: high pitch, low pitch, and mid pitch. High tone is marked with an acute accent (e.g. á), low tone with a grave accent (à), and mid-tone usually left unmarked.

Musical notation	**Tone**	**Sign**
M	Acute (high)	´
R	Neutral (mid)	¯
D	Grave (low)	`

Table 3.6

These marks are placed on the vowels. Tone, in tonal languages, is phonemic; that is, it is significant for meaning. This explains why utterances in a tone language like Yoruba, consisting of the same segmental phonemes have different meanings: for example, variation in the pitch level of the only sound segment produces different words as shown below:

(1)

(a) Kó = build - (acute (high)

(b) Ko = sing or crow- (mid(level)

(c) Kò = reject – (low (grave)

(2)

(a) Lo´ = (trans) plant - (acute (high)

(b) Lo = go - (mid(level)

(c) Lò = grind – (low (grave)

In the next section, I shift attention to the English language in Nigerian context. Despite the fact that there are over 500 languages spoken by different groups in Nigeria (Jowitt, 2005; Falola and Heaton, 2008), the official language adopted since independence (in 1960) is English. Its widespread nature and promotion over the years are largely due to the heterogeneous linguistic environment of the country. As a result, Nigerians find it difficult to adopt a particular indigenous language for use. Although there was a move to develop an official language (s) out of the three major indigenous ones, there were people, particularly those representing minority languages, who objected to the use of just the three majority languages of Hausa, Yoruba, and Igbo. They argue that the other languages were as crucial as those three languages. More significantly, they maintain that the 'English language [is the only] neutral language which cannot be seen as the "property" of any of the indigenous ethnic groups in the country' (Akindele & Adegbite, 1999: 102). Now I shall discuss the history of the English language in Nigeria.

3.3 The English Language in Nigeria

3.3.1 The History of English in Nigeria

The presence of the English language in Nigeria is a result of different factors such as the colonial administration, trading activities, missionary activities and the resulting political process in Nigeria by the Europeans.

Historical records attest that as far back as the 15th century, the Portuguese sea merchants and pirates on their trade expeditions found their way to the West African Coast, for instance, Prince Henry, the Navigator, was said to have cruised into Cape Verde in 1444 (Awonusi 2009). Thus, Portuguese was the first European language to be used in Nigeria. Portugal's relationship with Nigeria was quite cordial as it is on record that the Portuguese had established trading ports/forts in West Africa. One such example is Gwarto port in the ancient Benin Kingdom, a town which today can be found in Southern Nigeria. The relationship developed to such an extent that the 'Oba of Benin in the 14th Century sent an ambassador to Portugal between 1482 and 1495 while Portugal in response sent trading agents to Benin' (Crowther 1962:57). According to Christopherson (1953), for a number of years, Portugal enjoyed a monopoly of the West Africa trade. For Nigerians and the Portuguese to transact any business they had to communicate, and since none understood the language of the other, Nigerians had to learn Portuguese to enhance their penetration of the European market. Christopherson noted that during this period, "many of the Negros learnt Portuguese of a sort...I mean the so-called Negro Portuguese, a kind of Pidgin Portuguese" (ibid: 284).

The monopoly of Portugal on the West African coast was later challenged by other European countries like Britain and Demark. By the 18th Century, trade with Europe experienced a boom as the focus shifted from trading material to human trafficking. The slave trade became the major preoccupation of the British merchants (Dike, 1956 in Awonusi, 2004). During the boom in slave trade across the Atlantic, thousands of slaves were shipped to the plantations in the Americas and West Indies. While many workers were on the plantations to keep the industrial machines of Europe running, many more were retained to perform some other domestic chores. Whether in homes or on plantations, the slaves and their masters needed a language for communication. The need, therefore, arose to train the slaves to speak a common language: English.

With the abolition of human trafficking in 1807 (Taiwo, 2009), many of the freed slaves who had acquired a formal education were brought back from America and England to Africa and settled in Freetown, Sierra Leone. Many of the freed slaves of Nigerian origin returned from Sierra Leone and settled in Lagos and Abeokuta, in Nigeria (Akindele and Adegbite, 1999). This period also witnessed the influx of European missionaries into Nigeria apparently to spread Christianity among the “pagans”. To achieve this, it was compulsory for them to preach Christianity in a language or languages understood by the local people. Since the European missionaries did not understand the local languages, they had to use Nigerian interpreters. Many of the freed slaves of Nigerian origin who had been exposed to western education and Christianity abroad later served as interpreters, cooks, clerks and messengers for the Christian missionaries who spoke English. The primary aim of the church missionaries was not to make their

converts speak English but to enable reading of the Bible in their indigenous languages (ibid: 1999). This is because the only version of the Bible that was available then was in the English Language (Taiwo, 2009). The missionaries in their effort to reach out to people established schools and institutions. For example, schools were established at Church Missionary Society headquarters in Lagos and in Abeokuta. The mission to Nigeria led by Bishop Ajayi Crowther, a Yoruba slave educated by CMS, attracted evangelists and traders (Akindele and Adegbite, 1999). In South Eastern Nigeria, particularly in the Calabar region, the missionaries maintained a visible presence. The Presbyterian mission established a mission in Calabar in 1846 (Awonusi, 2004; 2009). The missionaries built churches and established schools. As Adetugbo (1979) puts it "the English language dominated the curriculum under various sub-heads" (ibid: 77). Many of the converts who had learnt English and the freed slaves became teachers in mission schools where they helped propagate the language by training locals in English (Akindele & Adegbite, 1999).

English was also introduced to Africa through conquest. After the Berlin conference of 1884-1885, African countries were partitioned among the world powers and colonization became formalised (Taiwo, 2009). At the same time, there was a marked increase in missionary activities. The missionaries built churches and more schools and encouraged parents to send their children to these schools. Taiwo (1980:7) says that 'to start a school, there was no formality to observe. The important element was the children… sometimes the children had to be induced by gifts… the parents demanded money for allowing their children to go school' (ibid: 7).

This gradual implantation of English education in Nigeria was driven by missionaries, clerks, catechists, and pastors as well as teachers (Awonusi, 2009).

With colonialism, the English language gained further functions. It not only became the language of the colonial administration, but it also became a school subject and the language of instruction at the higher primary school level. The British colonial government in 1882 established an ordinance that brought education under government control and made English the language of instruction in schools, thereby promoting an assimilationist culture. The high level of prestige which English enjoyed over local languages at that time infuriated local critics in Yorubaland (southwest), as shown in the editorial comment of the *Lagos Times* newspaper of July 26, 1882, part of which says: '…instances were not wanting of converts educated in England who on coming back to Nigeria pretended that they did not understand the vernacular and when spoken to, spoke through interpreters' (Lagos times 1882, 26 cited in Awonusi, 2009:54).

While the change of attitude from "assimilationist" to "nationalist" tendency was noticeable in Yoruba language towards the end of the century, it remained pure assimilationist in the Calabar region into the early part of the twentieth century. For example, it was reported that, when a school Ogoga, in the Calabar region, introduced the study of vernacular languages in 1945, students withdrew from schools because they felt that studying their languages was a waste of time when the hallmark of education was the ability to communicate in English (Awonusi, 2009).

Governmental response to the criticisms of the 1882 ordinance came in the form of the 1887 ordinance which allowed indigenous languages to compete with English. However, English was still protected because it's teaching/learning in schools was made a condition for giving grants to schools, consequent on the adoption of Henry Carr's report for the training of teachers in academic subjects and the methodology of teaching. It also introduced a certificate system for teachers which was bound to have a salutary effect on the teaching of English. It must be pointed out, however, that the vernacular languages developed their own literature, grammar, books and dictionaries for teaching e.g. Yoruba in 1852, and Hausa in 1857 (Awonusi, 2004; 2009; Taiwo, 2009).

By the end of the 19th century, most missionary schools remained concentrated in Yoruba land (south-west) and in the Calabar region (south-east) Nigeria. Two types of schools had emerged: namely 'government or government assisted schools which promoted English education; and mission assisted/private schools with emphasis on African education' (Awonusi, 2009:49). Northern Nigeria did not open up for missionary activities in the same way as the South. Lord Luggard (the colonial administrator) was reported to have promised the Sultan of Sokoto (Northern Nigeria) in 1903 that his administration would not interfere with Muslim religion (the dominant religion in the north) and would stop missionaries who might want to do so. With this attitude in the North, the colonial administration was therefore responsible for the establishment of schools in the north. Few schools were established, and they were aimed at educating the children of the Hausa/Fulani feudal class. The colonial government maintained a separate department and education for the north in order to enhance quality and standards.

The same administration also ensured that the 'cream of English education, mostly teachers of Ox-bridge origin were brought in as teachers' (Awonusi, 2009:58).

In 1914, the protectorates of Northern and Southern Nigeria were amalgamated as a result of the desire of the colonial government for a convenient administration of the two contiguous territories (Taiwo, 2009:4). Luggard who was the Governor General of the new combined colony of Nigeria encouraged a policy which replaced the European teachers in Nigerian schools by Nigerian teachers, perhaps to cut down costs (Fafunwa, 1974; 2004). Secondly, the various educational policies he enacted and supervised, promoted the use of indigenous languages too. For example, the 1927 Education report showed that vernacular books were produced, and their teaching was encouraged. Language Bureaux were set up with the primary aim of producing books in Yoruba, Igbo and Efik while the Hausa Language Board produced materials in Hausa for northern readers. However, the use of local languages in education was restricted to the primary and lower secondary schools while English became the medium of instruction in upper secondary (Adeniran, 1978:114) and the official language (Awonusi, 2009). The 1945 constitution recommended the use of English in the West and East and Hausa in the North as the official languages. Meanwhile, the 1954 Constitution Article 114 (1) recommended the use of English 'as the language of the national assembly and in the regional assemblies of the West and East, and Hausa in the North'.

On the 1st of October 1960, Nigeria gained independence from Britain. It is, however, clear that the English language played a major role in achieving national integration. At this stage, the English language and the local Nigerian languages intertwined more, and gradually, a “new” form of English different from other varieties of English started to manifest itself. Wherever a language (in this case English) comes in contact with other languages (local languages), there is always language change which in most cases naturally leads to different varieties (e.g. Nigerian English) (Chimuanya & Awonuga, 2015). As Achebe (1975) observed, ‘I feel that the English language will be able to carry the weight of my African experience ... But it will have to be a new English, still in communion with its ancestral home but altered to suit its new African surroundings’ (1975:62). There are many linguistic innovations in the area of lexis and syntax that show that the English language has undergone acculturation in the sense of being used to express the local culture of the Nigerian context. Examples are “go-slow” (meaning traffic hold-ups), “invitees” (meaning guests), “well done” (greeting to someone performing a task).

The nativisation is not only limited to lexis and syntax, it is even more noticeable at the phonological level e.g. sound substitution such as the replacement of mid central vowel sound /ɜ: / for [ɑ] in “service" pronounced as [sɑvis], "were" as [wa], "early" as [ɑ:li], "learn" as [lɑn], "birth" as [bɑt]; consonant deletion e.g. in words like *kill, sell, tell, call, cold, elder, older* pronounced as [ki], [sɛ], [tɛ], [kɔ], [kod] and [ɛda] respectively (Simo Bobda, 2001). Some Yoruba Nigerian English speakers sometimes simplify consonant cluster in English by adding vowels to make

English conform to the syllable structure of Yoruba (Sunday, 2010). When this happens, does intelligibility suffer?

In the following section, I discuss the functions of English in the Nigerian context.

3.3.2 The Role of English in Nigeria

The English language has a lot of functions it performs in different aspects of the country. Jowitt (1991) identified dominant roles English performs in Nigeria as an official language, medium of educational instruction, the language of the media, language of legislation and the law, religious observance and interpersonal relations. My focus in this section is to draw attention to the prominence of the English language in Nigeria by discussing some of the ways the language is used in the country.

3.3.2.1 The Place of English in the Nigerian Educational System

English has been widely used at all the levels of education in Nigeria. It has become the language of educational institutions in Nigerian schools and serves as the language of educational evaluation. The National Policy on Education (NPE) 1977, revised in 1981 and 2004, clearly spelt out the role of English as a subject in school in lower or early primary school while the medium of instruction at that stage is the mother tongue or the language of the immediate community up to the mid-primary level. From the mid-primary level up to the tertiary level, English becomes the language of instruction and is taught as a school subject. However, this requirement in government documents is not entirely put into practice or in some cases not implemented at all (Amuseghan, 2007). In most

private primary schools in Nigeria, particularly in cosmopolitan areas, pupils use English as a medium of instruction right from the nursery level. In such schools, the use of mother tongue or indigenous languages is forbidden, 'violation of which draws sanctions in one form or the other with the resultant effect of taciturnity, on the part of many learners' (Owolabi and Dada 2012). Many parents pay exorbitant amounts in fees to enrol their children in these schools because of the perceived socioeconomic advantage associated with a "correct English education". They also believe that the acquisition of English at this level gives a good academic foundation. The policy also stipulates that every child should be made to study English and any two Nigerian languages.

In secondary education, English is used for testing students' understanding and performance in other courses during school leaving secondary examinations. To obtain admission into higher institutions, credit at O' level in English is required, but some insist on a pass depending on the course the student is going to study. English is also a compulsory subject in recognised examinations like the University Joint Matriculation Examination (an examination taken before gaining entrance to study in Nigerian universities). At the university level, all courses are taught in English except for some language courses such as Yoruba, and Igbo. It is also mandatory for all first-year students in higher institutions to undertake a course in the "Use of English" and pass the course before they are allowed to graduate.

3.3.2.2 The Language of Governance

The English language is the language of government in Nigeria because it is the main official language of the country and almost all the transactions in government offices such as minutes, circulars, directives, reports, memoranda, and official correspondences are carried out in English. The use of English in government corporations, ministries can be traced back to the era of colonial administration (Awonusi, 2004; 2009; Akindele & Adegbite, 1999). During this period, the colonial administrators and missionaries could not speak the several languages of the diverse tribes in Nigeria, and so English was introduced as a medium of communication between colonial administrators and Nigerians. The 1922 Constitution first made English the official language and language of administration. On attainment of independence in 1960, English remained the official language of the country. The section 51 of the Nigerian constitution of 1979, revised in 1989 and 1999 stipulated that 'the business of the National Assembly shall be conducted in English, and in three national languages namely: Hausa, Ibo, and Yoruba when adequate arrangements have been made thereof'. It can be seen that English seems to take priority over the indigenous languages since the three national languages are tied to conditions of "adequate arrangement". It seems clear that no one knows the specific time when these adequate arrangements would be made and what are involved in making the arrangement (Akindele and Adegbite, 1999). The section of the same constitution maintains that 'the business of the [state] House of Assembly shall be conducted in English, but the House may in addition to English conduct the business of the House in one or more languages spoken in the states as the House may by resolution approve' (Article 97). These various provisions in government

documents are not entirely put into practice or in some cases, not brought into practice at all. Awonusi (2004) has noted that Nigerian languages are neither used by government officials or in government business. Instead, they are only used slightly for purposes of 'information dissemination or propaganda during political campaigns to gain the vote of the masses (ibid: 2004).

3.3.2.3 The Role of English Language in the Media

The English language is the most widely used language in the Nigerian media. When we refer to the Nigerian media systems, we mean both the mixture of electronic and print media. The former can be further divided into radio and television. As far back as the nineteenth century, the Lagos Times newspapers and Weekly Records newspaper were in circulation in Lagos. These newspapers were published only in English. However, a few local language papers surfaced towards the close of the century like the first Yoruba language newspaper *Iwe Irohin* which was published in 1859 in Abeokuta. Apart from these early newspapers, most of the daily newspapers (such as The Guardian, the Times, The Vanguard, The Punch, The Sun, This Day, The Independent) produced today are published in English while those produced in local languages are very few. Apart from the daily newspapers, the weekly magazines (such as, "This Week Magazine," "the New Times, "African Guardian", "Newsweek" "the News Watch Magazine") began to flourish from the beginning of the 80s. These magazines also published in English. Other print media, mostly the small magazines like the City People, National Encomium, Ikebe Super, and Today's Choice print their news in both Standard and Pidgin English (Awonusi, 2004). Furthermore, the electronic media (television and radio stations) broadcast the majority of their

programmes including local movies and drama in English (Awonusi, 2004). Few stations, however, dedicate time slots to the use of local languages and pidgin language.

Having discussed the roles English played in the Nigerian context, I shall now move on to describe the varieties of Nigerian English.

3.4. Nigerian English (NigE)

In the process of the domestication[14] of English in Nigeria, scholars of Nigerian English (Brosnahan 1958; Banjo 1971; Jibril 1982; Bamgbose 1971; 1982; 1993; Odumuh 1987; Ufomata 2015; Jowitt 2000; Udofot 2004; 2007; Gut 2005; Awonusi 2004; Alo 2004; Adetugbo 2009; Bobda 2007; Josiah & Babatunde 2011) have attempted to classify varieties of Nigerian English, based on different parameters. One such parameter is ethnic, that is, the influence of mother tongues at the phonological level (Chimuanya & Awonuga, 2015). Using this parameter, Runsewe (1986) explains that scholars have used "the locality from which speakers come as a label for the type of English they speak" (Runsewe, 1986:34). In other words, by listening to spoken English of a Nigerian, it is usually possible to envisage the part of the country such a person came from and this is because the accents of most speakers are often very "heavily spiced with

[14] Domestication, as deducible from the works of linguists such as those cited in this paragraph, refers to the various changes undergone by a language in the course of its spread and implantation in alien speech communities. These various changes occur at all levels of linguistic organization: morphological, lexical, syntactic, semantic and even rhetorical. Hence, if a language is said to have been domesticated, it presupposes that the use of the language, especially for oral communication, has gone beyond the regional boundaries of its native speakers.

indexical features of the mother tongue of the speakers" (Runsewe, 1986:34 cited in Fajobi 2008). It is by this ethnic parameter that we have Yoruba-English, Hausa-English, Ibo English, Efik English, and Urhobo English (Jibril 1982).

The second parameter is the linguistic criteria. Using this parameter, Banjo (1971a) describes the linguistic features of the varieties based on the level of deviation from, or approximation to Standard British English (SBE). He introduces two other variables: the extent of social acceptability within Nigeria and the degree of international intelligibility.[15] Banjo (1971) identifies four varieties of English spoken by Nigerians:

Variety 1: The variety of English spoken by those whose knowledge of English is very imperfect, socially unacceptable and internationally unintelligible. Their speech is often marked by wholesale transfer of speakers' mother tongue (MT) features into English.

Variety 2: This variety is syntactically close to Standard British English (SBE), but speakers' utterances are strongly marked by some phonological and lexical peculiarities which differ from SBE. This variety has a relatively high degree of social acceptability, but its level of international intelligibility is low.

Variety 3: It is a variety regarded as being syntactically and semantically close to Standard British English. Its phonology is similar to Standard British English but different in phonetic features as well as lexical differences. Phonetically, Banjo

[15] (see also Banjo 1993 and Bangbose 1992:149-151).

declares, it “has RP deep structures and Nigerian surface features” (Banjo 1971:169). It is socially acceptable and internationally intelligible.

Variety 4: It is identical to Standard British English in syntax, semantics, phonology and phonetic features. Even though it is maximally internationally intelligible, it is socially unacceptable. Only a handful of Nigerians who have either acquired English as a native language or have been raised in a native environment speaks this variety.

The third and the final parameter is educational level. In classifying these varieties of Nigerian English using this parameter, Brosnaham (1958) identifies four levels of usages corresponding to stages in education attainment. They are:

Level 1: (Pidgin) spoken by those with no formal education;
Level 2: The variety spoken by those who have completed their primary school education. Most speakers belong to this level;

Level 3: Spoken by those who have finished their secondary school education. It is marked by increased fluency, a wider vocabulary, and conscious avoidance of Level 1 usage.

Level 4: Spoken by those who have completed their university education (graduates). The variety is close to Standard English but retains some features of Levels 2 & 3.

Some other scholars like Fajobi (2008), Adeniran (1979) and Adekunle (1974) also depend primarily on educational attainment as a yardstick for identifying standard Nigerian English on the grounds that the level of exposure of a university student or graduate is expected to be more than primary or secondary school leavers. However, Afolayan maintains that it is not easy to decide what level of education one must attain before being regarded as a speaker of standard Nigerian English. This, according to Bamgbose (1971, 1982), is because there are speakers who perform lower than, or beyond the expected level of competence based on their level of education. Although one would expect a university graduate to be a "variety III speaker" in Banjo's classification if a small number of such graduates cannot attain that standard, they should be classified with speakers of the appropriate lower variety. Similarly, there are secondary school leavers in Nigeria today who have attained higher proficiency in the use of English than some graduates. What this means, in effect, is that educational attainment alone as a variable cannot serve extensively for a detailed empirical research Bamgbose (Jowitt, 1991; Bamgbose, 1992; Awonusi, 2015).

Thus, the variety of Nigerian English described in this study is variety III of Banjo's classification which is acrolect in sociolinguistic classification. This is the variety that has gained wider recognition in academic circles (Jibril, 1982; Eka 1985; Jowitt 1991; 1996; 2006). It has been described as the Standard Nigerian English (SNE) or Educated Nigerian English (ENE). (Olaniyi, 2010) This variety refers to the English spoken by "educated" Nigerian users, particularly in very formal contexts and by broadcasters, undergraduates, and graduates of higher institutions, scholars, high ranking army officers, the bar and the bench, the

intelligentsia, children from sophisticated family background, experienced junior civil servants and senior civil servants (Ekundayo, 2013; Olajide & Olaniyi, 2013). According to Banjo (1993), the SNE variety is both socially acceptable within Nigeria and internationally intelligible (though there is no evidence to support his later claim). Also, Jowitt (1991) argues that this variety has the highest number of speakers, ranging from secondary school certificate holders, undergraduates, graduates and those in graduate schools, university lecturers, professionals, journalists, editors, and professors. This is the variety spoken by both the speakers and the Nigerian listeners used in this present study.

Having discussed the varieties of Nigerian English, I shall now move on, in the final part of the chapter, to discuss the features of standard Nigerian English at different linguistic levels.

3.4.1 Features of Nigerian English

3.4.1.1 The Lexical Level

At the lexical level, Banjo's variety III of Nigerian English differs from standard British English and other English varieties mostly in the use of some culture specific vocabulary items. There are also new lexis including idioms coined or borrowed from the vernacular to serve a particular purpose. Odumuh (1984) and (Okoro, 2004 put date) discuss a significant number of lexical items and expressions which have undergone a semantic change in Nigeria usage and compare these with usage in British Standard English. The list includes such items as "broke", to refer to an insolvent person, "fellow" to refer to an individual, including a woman, "chop" for BSE food, "globe" for BSE electric bulb, "long leg",

for BSE undue influence. We have coinages such as “to flit a room” (meaning to spray it with an insecticide), “particulars” (my personal observation meaning vehicle documents), “been to” (is a person who has returned to Nigeria after a long stay overseas), “scale through” (move easily through in sloving of a problem), “cover cloth” (is a long piece of cloth usually wrapped around the body when one lies down to sleep), “well done” (greeting to someone performing a task). There is also semantic extension or shift, that is, words which have originated from English but take on additional meaning in the Nigerian context. For example, the term “aunty”, “uncle”, “father”, “mother”, “brother” and “sister” are used not only to express family relationship but also a term of respect for an older person who may have no connection at all with one’s immediate or extended family (Akindele & Adegbite,1999, Ajani, 2007). Okoro (2004:175) draws attention to the use of English lexical items to express entirely different meaning or concepts from the original: For instance, using the lexical items (in quotation marks) in the expressions below when the items in brackets are meant: The food is too “sweet” (very delicious), they love “themselves” (each other), the “dowry” is high (bride price), Charles is a “four-one-nine” (fraudster or a cheat), I will climb a “machine” to the junction (motorcycle)[16], He bought a new “bike” (motorcycle)[17], I don’t “hear” Yoruba (understand), I can “hear” a smell (smell something), he is my “senior/junior” brother (elder/younger), I will return to my “station” tomorrow (workplace).

[16] In Nigerian English, “climb a machine” is used for BSE “ride a motorcycle”.

[17] The term “Machine” and “Bike” is used for a motorcycle in Nigerian English (this is a personal observation).

3.4.1.2 The Syntactic Level

At the syntactic level, there are few differences between the grammatical features of standard Nigerian English and those of the British Standard English. Firstly, the dropping of articles before nouns where they are mandatory in BSE as shown in the following examples:

a. The teacher gave us / assignment. (omission of article 'an')
b. The baby gave me/tough time. (omission of article 'a')
c. Some of them are in /hurry. (omission of article 'a')
d. He asked me to have /seat. (omission of article 'a')
e. He came to the city to look for / job. (omission of article 'a')

Secondly, some speakers of this variety have problems with the use of prepositions. According to Dadzie (2004), this is so because of the difference between how English and the local languages express relationships. Below are some examples of prepositional usage in Nigerian English.

(i) They were *on* the queue when you came in.
(ii) I was *in* the bus
(iii) He pays attention *on* the age differences.
(iv) The baby is *in* her mum's back[18].
(v) We are going *fo*r vacation.

In Standard British English the italicized words will be different prepositions.

[18] (meaning the baby is being carried on her mum's back)

(vi) They were *in* the queue when you came in.

(vii) I was *on* the bus

(viii) He pays attention *to* the age differences.

(ix) The baby is *on* her mum's back.

(x) We are going *on* vacation.

On other occasions, prepositions are introduced where they are not required in Standard British English:

(i) Dealers demanded *for* eight billion

(ii) The thieves bolted *away* with the money

(iii) There were *about* three houses on the street

(iv) The team comprises *of* Europe based professionals

Standard British English, in these above examples, would be:

(v) Dealers demanded eight billion

(vi) The thieves bolted with the money

(vii) There were three houses on the street

(viii) The team comprises Europe based professionals

There is also a tendency to omit the preposition where SBE will insist on it. Some examples are:

(i) We condoled the parents of the deceased

(ii) We arrived three o'clock at the venue

(iii) The association will rule Tuesday on the outcome

Standard British English, in these above examples, would prefer,

(i) We condoled *with* the parents of the deceased

(ii) We arrived *at* three o'clock at the venue

(iii) The association will rule *on* Tuesday on the outcome

Thirdly, another widespread phenomenon in Nigerian English is in the use of reflexive pronouns such as "themselves" and "ourselves". They are used in place of "each other" as in the below example:

(i) I met Julie and we greeted ourselves.

(ii) We shook ourselves when we met.

(iii) Myself[19] and Julie were there.

Standard British English, in these above examples, would be,

(iv) I met Julie and we greeted each other.

(v) We shook hands when we met.

(vi) Julie and I were there.

(Dadzie, 2004:236)

3.4.1.3 The Phonological Level

The greatest influence on the pronunciation of English by Nigerians is from the sound systems and word stress of the regional languages (Idowu, 1999). In this section, the phonological features of Standard or Educated Nigerian English are discussed starting from the phonemic inventory to suprasegmental features.

[19] It is increasingly being heard in varieties of British English

3.4.1.3.1 The Vowel System in Standard Nigerian English

Scholars (Brosnahan 1958; Banjo 1971; Adetugbo 1977, 2009; Jibril 1979, 1982; Bamgbose 1982; Eka 1985; Awonusi 2004; Jowitt 1991, 2000; Udofot 1997, 2004, 2007; Gut 2004; Bobda 2007) have explored the interference features from the native languages in Nigeria and have described what they referred to as Educated or Standard Nigerian English vowels. These vowels according to Olajide & Olaniyi (2013) and Simo Bobda (2007) have some traits of L1 sounds transferred into English. The vowel inventory of educated Nigerian English is shown in the given figure and tables below:

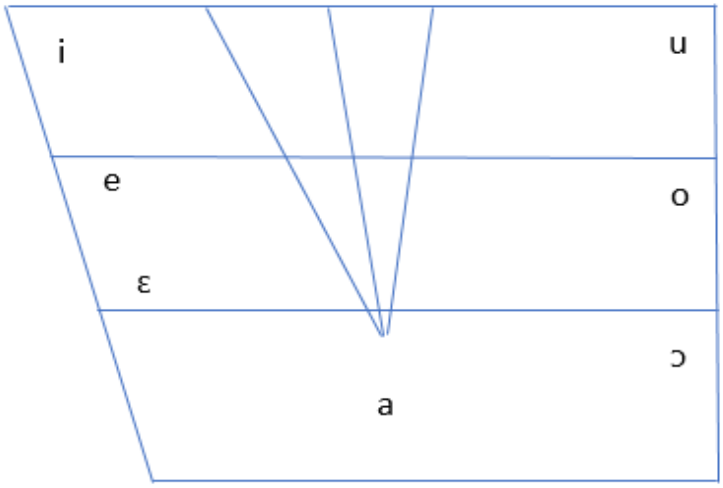

Figure 3.4. The vowel system in Nigerian English

Table 3. 7 Diphthongs in Nigerian English

Sound	**Nigerian English**
eɪ	[e, e:]
aɪ	[aɪ]
ɔɪ	[ɔɪ]
əʊ	[o, o:]
aʊ	[aʊ]
ɪə	[ɪe, ɪɑ]
ɛə, eə	[eə, ɪɑ, e: ɛ:]
ʊə	[uɔ]

From the inventory table and chart presented above, Standard Nigerian English or Educated Nigerian English has seven simple vowels and different realisations of diphthongs (Brosnahan 1958; Adetugbo 1977, 2004; Jibril 1979, 1982; Bamgbose 1982; Eka 1985; Awonusi 2004; Jowitt 1991, 2000; Bobda 2007). In the following, I retain a comparison with RP as this is how existing literature reports its findings. The patterns of realisation of these vowels in Nigerian English can roughly be summarised as follows:

Table 3.8 Realisations of vowels in Standard Nigerian English

Vowels	**Realisations**
k**i**t, fl**ee**ce	/i/; much shorter than RP /i:/
tr**a**p, b**a**d, b**a**th, p**a**lm	/a/; much shorter than RP /ɑ:/
dr**e**ss	/ɛ/, but /e/ before one and only one medial consonant
l**o**t, cl***o***th	/ɔ/
th**ou**ght, n**o**rth, f**o**rce	/ɔ/; much shorter than RP /ɔ:/
str**u**ct	/ɔ/
f**oo**t, g**oo**se	/u/; much shorter than RP /u:/
n**ur**se	/a, ɔ, ɛ, ɛ:, e /
face	/e:/ and /e/
pr**ic**e	/aɪ/
m**ou**th	/aʊ/
ch**oi**ce	/ɔɪ/
g**oa**t	/o/; and /o:/
n**ea**r	/ɪɑ/
squ**are**	/eə, ɪɑ, e: ɛ:/
lett**er**	/a/
comm**a**	A wide range of realisations.

Source: Adapted from Simo Bobda (2007:284)

The inventory table and chart above show that the high front vowels /i:/ and /ɪ/ are neutralized as [i] in Nigerian English, suggesting that the vowel quantity is midway between the long /i:/ and the retracted /ɪ/ of RP (Adetugbo 1987; Ufomata 1996; Josiah and Babatunde, 2011). The low front vowel /æ/ and the low back vowel /ɑ:/ are neutralized into [a] in many cases. Likewise, the high back vowels /ʊ/ and /u:/ in RP mostly occur as [u] in Nigerian English and, occasionally, remain [u:] in accented positions or [ʊ] in unaccented environments. The mid-back vowels /ɒ/ and /ɔ:/ of RP are mostly realised as [ɔ]. This can be illustrated in the following examples:

RP	*Nigerian English*
[i:] [ɪ]	[i] bead, bid
[u:] /ʊ/	[u] food, foot
/æ/ /ɑ:/	[ɑ] bath, bag
/ɒ/ /ɔ:/	[ɔ] pot, port

We can also notice the absence of central vowels of RP /ʌ/, /ɜ:/, and /ə/ from the inventory of Nigerian English. As mentioned earlier, the vowel /ʌ/ is generally realised in Nigerian English as [ɔ] as in the following examples:

word	RP	NigE realisation
cup	/kʌp/	[kɔp]
son	/sʌn/	[sɔn]
bus	/bʌs/	[bɔs]
mother	/ˈmʌðə/	[ˈmɔda]
number	/ˈnʌmbə/	[ˈnɔmbə]
young	/jʌŋ/	[jɔŋ]

Also, the mid-central vowel /ɜ: / is generally realised as [ɔ,ɛ,e,ɑ] (Adetugbo, 1993:145) as shown in the following examples:

word	RP	NigE realisation
work	/wɜ:k/	[wɔk]
journey	/dzɜ:ni/	[dzɔni]
hurl	/hɜ:l/	[hɔl]
dirty	/dɜ:ti/	[deti]
girl	/gɜ:l/	[gɛl]
myrrh	/mɜ:r/	[mɛr]
termite	/tɜ:mait/	[tɑmait]
learn	/lɜ:n/	[lɑn] or [lɛn]
maternity	/mətɜ:niti/	[mɑtɑniti]
first	/fɜ:st/	[fɔst] or [fɛst]
birth	/bɜ: θ/	[bɑ:t]

Examples are taken from Simo Bobda (1995:261)

The /ə/ is another central vowel that has a variety of realisation in Nigerian English and is realised as [ɑ, ɛ, ɔ, and u] in the below examples:

Word	RP	NigE realisation
sofa	/səufə/	[sof**a**]
statement	/steɪtmənt/	[stetm**e**nt]
flexible	/flɛksəbl/	[flegz**i**bl]
doctor	/dɒktə/	[doktɔ]
status	/steɪtəs/	[stetus]

We can also notice from the inventory table that only three of the English closing diphthongs /aɪ/, /aʊ/, and /ɔɪ/ appear to remain invariable. Two of the closing diphthongs /eɪ/ and /əʊ/ have a monophthongal realisation [e, e:] and [o: ɔ] respectively (Bobda 1995; Banjo 1996; Adetugbo 2009; Udofot 2004). None of the centring diphthongs /ɪə/, /ɛə, eə/, /ʊə/, as observed from Table 3.7, seem to be a common feature of standard Nigerian English phonemes, at least, in the majority of cases. /ɪə/ is variously realised as [ɪɑ, ɪe]; RP /ɛə, eə/ is realised as [e: ɛ:] and /ʊə/ is articulated as [uɔ]. The following examples illustrate these vowels in words:

	Word	RP	NigE
[eɪ] realised as [e] in	day	/deɪ/	[de]
	hay	/heɪ/	[he]
	hate	/heɪt/	[het]
	rain	/reɪn/	[ren]
	state	/steɪt/	[stet]
	lake	/leɪk/	[lek]
[əʊ] realised as [o] in	go	/gəʊ/	[go]
	home	/həʊm/	[hom]
	focus	/ˈfəʊkəs/	[ˈfokɔs]

	Word	RP	NigE
[ɪə] realised as [ɪɑ] in	here	/hɪə/	[hɪɑ]
	beer	/bɪə/	[hɪɑ]
[ɪə] realised as [ɪe] in	nutrient	/nju:trɪənt/	[nutrɪent]

	Word	RP	NigE
[eə] realised as [ɛ:] in	hair	/heə/	[hɛ:]
	there	/ðeə/	[dɛ:]

Triphthongs

As Ubong and Babatunde (2011) and Awonusi (2004) rightly observed, Nigerian English typically does not have triphthongs. In most cases, triphthongs are usually split into two distinct syllables where the middle element changes into a glide. The normal central vocalic element, namely [ɪ] and [ʊ] are pronounced like the semi-vowels [j] and [w]. Thus, [aɪə] as in *hire* is realised as [ɑjɑ] and [aʊə] in *hour* is pronounced as [awa] (Jowitt, 1991; Banjo, 1996; Udofot, 2004)[20].

RP	Nigerian English
/aʊə/	[awa]
/aɪə/	[aja]
/ɔɪə/	NI[21]
/əʊə/	NI

Table 3.9. Adapted from Josiah and Babatunde (2011:54)

3.4.1.3.2 The Consonant System in Standard Nigerian English

Most research studies (Jibril, 1982; Adetugbo, 2004; Eka, 1985; Jowitt, 1999) on NigE demonstrated that the consonantal system in standard Nigerian English does not deviate significantly from RP; however, a few remarks are required to

[20] For more on the restructuring of RP triphthongs in Nigerian English, (See Brosnaham 1958; Banjo 1971; 1996; Adetugbo 1977; 2009; Ekong 1978; Jibril 1979; 1982; Eka 1985; 2000; Odumuh 1987; Jowitt 1991; Udofot 2004; Adegbija 2004; Awonusi 2004; 2009; Josiah and Babatunde, 2011).

[21] The notation "NI" indicates those phonemes "not included" in the Nigerian English phonemic system

show areas of discrepancy (Josiah & Babatunde 2011). One significant observation is that there are some consonantal sounds that exist in British English BRE variety that do not exist in Nigerian English or that are pronounced differently by speakers of Nigerian English.

Table: 3.10 Realisation of consonants in Standard Nigerian English

RP	Nigerian English
/p/	[p], [f][22]
/b/	[b]
/t/	[t]
/d/	[d]
/k/	[k]
/g/	[g
/f/	[f]
/v/	[v]
/θ/	[t], [s][23]
/ð/	[d], [z][24]
/s/	[s]
/z/	[z][25]
/ʃ/	[ʃ]
/ʒ/	[ʒ], [ʃ][26]
/h/	[h][27]

[22] The Hausa speakers sometimes pronounce /p/ as [f]

[23] Voiceless dental fricative /θ/ is pronounced as [t] in southern Nigerian by Yoruba speakers of English while in the north it is pronounced as [s] by Hausa speakers of English

[24] Voiceless dental fricative /ð/ is pronounced as [d] in southern Nigerian by Yoruba speakers of English while in the north it is pronounced as [z] by Hausa speakers of English

[25] Nigerian English accent has [z] in z-words, except those of the Z morpheme. In the realisation of Z morpheme (the plural possessive and third person singular marker, -orthographic s), Nigerian English accent has a phonological representation of /s/. E.g. the word "boy<u>s</u>" is pronounced as/bɔɪs/. The voicing opposition, which RP maintains in pairs like niece-knees, ice-eyes, and lace-lays, is neutralised in Nigerian English (Awonusi, 2009).

[26] Voiced palato alveolar fricative [ʒ] is pronounced as [ʃ] in some southern educated Nigerian accent

[27] Often silent in Yoruba speakers and other southern accents (Simo Bobda, 2007)

/tʃ/	[tʃ][28]
/dʒ/	[dʒ]
/m/	[m]
/n/	[n]
/ŋ/	[ŋ]
/l/	[l]
/r/	[r]
/j/	[j]
/w/	[w]

Source: culled from Josiah and Babatunde, (2011:542).

The alveolar stop /t/ and /d/ and velar stop /k/ and /g/ are realised by Nigerian speakers as RP /t/ and /d/, /k/ and /g/ respectively except that in some cases the voiceless alveolar stop /t/ and velar /k/ is un-aspirated in word-initial position (Awonusi 2004). The voiceless dental fricative /θ/ and /ð/ have different realisations in Nigerian English. For example, in most cases /θ/ and /ð/ are realised by [t] and [d] respectively, but sometimes Hausa speakers pronounce it with [s] and [z] respectively. The alveolar fricatives /s/ and /z/ are phonetically significant for most educated Nigerians as they are for RP speakers. However, occasionally the voiced alveolar fricative /z/ poses a problem to NigE speakers, this according to Jowitt (2000) is lacking in most Nigerian languages as a result, -z morpheme (the plural possessive and third person singular marker) is phonologically realised as /s/ as in the example “lies” /lɑɪz/ for [lɑɪs].

[28] [ʃ] is pronounced in many southern accents

Having discussed the phonemic inventory of Standard or Educated Nigerian English, I shall now move on to discuss some major consonantal and vocalic processes.

3.4.1.3.3 Some Consonantal and Vocalic Processes in Nigerian English

Simo Bobda (1995; 2007) reviews some major consonantal, and vocalic processes in Nigerian English (NigE) and these are listed below:

1. Devoicing of Word-final consonant such as [rop, lif, dʒɔtʃ] robe, leave and judge for RP [rəʊb, liːv, dʒʌdʒ].
2. Consonant clusters are often simplified in final position. The process mostly affects two alveolars like [-nd, –st, -ld] for example [han, pos, kol] for *hand, post* and *cold*.
3. Post-vocalic /l/ in word-final position is often deleted in NigE. For example, [ki, se, te, eda, oda] kill, sell, tell, elder and older for RP [kɪl, sel, tel, ˈeldəʳ, əʊld].
4. Vocalization of /l/ in final clusters to vowel /u/ E.g. article [atiku], handle [handu], devil [devu], travel [təravu]. Sometimes the Nigerian speaker of English adds [l] as in [artikul], [handul].
5. Nasalization in NigE as described by Simo (1995:3263) causes a vowel to become nasal in the environment of a following syllable-final nasal consonant /n, m, ŋ/. For example, [fæ̃n bũn, sɔ̃ndei, rɒ̃ŋ] (fan, boon, Sunday, wrong) (Bamisaye 1990:21) or a nasalized vowel can occur while the post-vocalic nasal is deleted as in [mɑ̃] man, [wumɑ̃] woman, [kɔ̃] come, [rũs] rooms (Simo Boda 2007:290).

6. In NigE, the pronunciation of –ing word final position is often pronounced [in] instead of [iŋ]. For example, [livin] (living) (personal data); [tĩns] (things) (Simo Bobda, 2007).
7. Unlike RP, Nigerian English has no dark [ɬ]. All its l's are realised as clear, e.g., beɬt, miɬk, kɔɬ in RP becomes belt, milk, kɔ: or kɔl respectively (Simo Bobda 2007).
8. Spelling pronunciation: This involves the pronunciation of the letter. For example, [debt] debt (personal observation) or [dept] (Simo Bobda 2007); realisation of [b] in tomb, plumber, comb and realisation of [t] in listen (Sotiloye, 2007).

At the syllabic level, Akindele and Adegbite (1999) maintain that most Nigerian languages lack consonant clusters. As a result, vowels are inserted immediately after the production of a consonant sound. Therefore, words like "little" and "bottle" are pronounced as [litu] and [bɒtu].

At the level of tone, there are also clear phonological transfer features at the stress and intonation levels. The fact that most Nigerian languages are tonal while English is stress-timed and intonational creates some problems for Nigerian English bilinguals in learning RP sounds. Hence a Yoruba English bilingual stresses every syllable in the utterance (S)/he produces in English. E.g. cha ra cter instead of character or he uses a different stress pattern on some English words.

Simo Bobda (1995) has made pertinent observations about stress “deviations” in NigE.

(a) Unlike RP, which essentially has a backward stress, Nigerian English shows a marked tendency for forward stress. Stress is usually established one or two (occasionally three) syllables later than its position in RP, as in the following examples:

RP	NigE
ˈ salad	Saˈlad
ˈ colleague	colˈleague
ˈ mattress	matˈtress
ˈ petrol	peˈtrol
ˈ hurricane	hurriˈcane

(b) Words with [i] and [n] in the final syllable tends to pull stress towards the preceding vowels e.g.

RP	NigE
ˈ protein	proˈtein
ˈ bulletin	bulleˈtin
ˈ carton	carˈton
ˈ biscuit	bisˈcuit
ˈ plantain	planˈtain
ˈ moron	moˈron
ˈ tennis	tenˈnis
ˈ taxi	taˈxi
ˈ petty	petˈty

(c) Consonant clusters tend to pull stress forward to the following syllable as in anˈcestor, caˈlender, orˈchestra, chaˈllenge for RP ˈancestor, ˈcalender, ˈorchestra, ˈchallenge.

(d) Nouns, adjectives and function words have much greater tendency to be stressed initially than RP; e.g. nouns: ˈsuccess, ˈadvice, ˈassault, ˈembargo, ˈprofessor, ˈdiploma, ˈdeposit (RP sucˈcess, adˈvice, asˈsault, emˈbargo, proˈfessor, diˈploma, deˈposit); Adjectives: ˈacute, ˈextreme, ˈappropriate, ˈaugust, ˈdiscreet (RP aˈcute, exˈtreme, ˈappropriate, auˈgust, disˈcreet); Function words: ˈdespite, ˈunlike. ˈtowards, ˈinstead (RP deˈspite, unˈlike, toˈwards, inˈstead).

(e) Compounds usually have their primary stress on the first element in RP, but in Nigerian English, they are generally stressed on the second: e.g. fireˈwood, proofˈread, wardˈrobe, workˈshop, bedˈroom (RP ˈfirewood, ˈproofread, ˈwardrobe, ˈworkshop, ˈbedroom).

(f) Apart from those ending in sonorants, verbs are probably more likely than any other class of verbs to have final stress; e.g. to boyˈcott, to eliˈcit, to interˈpret, to soˈlicit (RP to ˈboycott, to ˈelicit, to ˈinterpret, to ˈsolicit).

3.5 Chapter Summary

As a contextual framework for this study, the chapter has placed the historical and sociolinguistic backgrounds of Nigeria in perspective. I started with a discussion of the general linguistic situation of Nigeria with major emphasis on Yoruba language, the mother tongue of the Nigerian English speakers that presented the recordings used in the present study. I also looked at the phonemic system of Yoruba language and the main differences between the pronunciation system of Yoruba and Standard British English/RP. It was important because

understanding the L1 knowledge of the speakers (that presented the recordings) would explain some of the phonological transfer of the speakers L1 into English. It is also important in gaining an understanding of the difficulties speakers encountered in pronouncing English sounds which in the course of the thesis underpins some of the discussions in Chapter six.

I then moved to the second part of the section of the chapter, where I discussed the role English plays in Nigeria and the way it is used. Here, I argued that the English language performs more functions in the Nigerian environment than the indigenous languages. Even with the attainment of Nigeria's independence from colonial rule, English continues to be privileged particularly in the formation of political and educational systems. It has received the legal status of the language of administration, legislation, government, media, commerce, sports, science and technology and intra and international communication.

I went further to describe the varieties of English used in Nigeria with a major focus on Standard or Educated Nigerian English. An important point I made in my discussion of English in Nigerian context is that the way Nigerians make use of English sounds, stress and intonation varies from Standard British English/RP and other L2 users. These differences are caused by social and linguistic factors. At the sound level, there is a great difference in the realization of the vowel sounds by Nigerian speakers of English as compared to L1 English users and other L2 users (Adetugbo, 1978; Awonusi, 1986). These differences or variation in pronunciation are not limited to the sound segments alone but also to the suprasegments as is evident in the use of word stress and intonation by Nigerian

speakers of English as a second language. Considering these pronunciation variations, the critical questions for pronunciation teachers in Nigeria is: What pronunciation features used by Nigerian speakers of English militate against intelligibility, and what are the implications for teaching English pronunciation in Nigeria?

Chapter Four
The Concept of Intelligibility

4.1 Introduction

This chapter focuses on defining and explaining concepts of speech intelligibility by drawing on areas of L2 speech, World Englishes, and English as Lingua franca. In addition, it explicitly and critically reviews empirical research on intelligibility and looks at how mutual intelligibility is approached in terms of NNS-NS communication, and NNS-NNS perspective.

4.2 Defining and Conceptualising Intelligibility

There is no universally agreed upon definition among linguists and researchers of what constitutes intelligibility or ways of measuring it (Smith and Rafiqzad 1979, Smith 1992, Derwing and Munro 1997, Munro and Derwing 1995, Jenkins, 2000, Field 2005, Pickering 2006, Kirkpatrick et al., 2008). In the area of L2 speech, the term intelligibility is widely used (Rogers 1997 cited in Osle, 2013), while in the field of L2 phonological acquisition, terms such as “comprehensibility”, “communicative effectiveness”, “interpretability” or “accentedness” are usually mentioned in connection with the notion of speech intelligibility. Kent *et al*. (1989: 489 in Angel, 2013) define intelligibility as ‘the degree to which a speaker’s intended message is recovered by the listener’.

Rogers (1997: 2-3) distinguishes between “intelligibility”, “comprehensibility” and “communicative effectiveness”. Intelligibility refers to the effective ‘production, transmission or perception by a listener of the speech sounds of a language’.

Comprehensibility refers to an individual's success, or lack thereof, in conveying a specific message and includes not only variables related to the speech sounds but also to additional linguistic features, i.e. syntactic, lexical etc. Communicative effectiveness, on the other hand, seems to involve those linguistic and non-linguistic variables that may determine communicative success. Other scholars, such as Gass and Varonis (1984), use the term comprehensibility to mean communicative effectiveness without specifying the possible impact of linguistic and non-linguistic variables (Osle, 2013).

Catford (1950) distinguishes between intelligibility and communicative effectiveness. The former refers to the understanding of the linguistic form, while the latter points to the hearer's response to the speaker's intended message. Catford (1950: 9) further notes that, from the perspective of the language learner, speech 'should be not only intelligible, in the narrow sense, but also effective'. He gives the example of the foreigner who sees both cakes and tarts on a table. Wanting a tart, but knowing only the general word "cake", he is disappointed when his hostess passes him a cake. The foreigner's utterance was intelligible but ineffective. On the other hand, it would have been possible for the foreigner to ask for a tart in his own tongue and obtain it by extra-linguistic means, such as gesturing. In this case, his utterance would be unintelligible but effective. Catford considers that the term "intelligible" can only be used for utterances that are both intelligible and effective. Similarly, Kenworthy (1987; 1996:117) equates intelligibility to "understandability" and defines this as "being understood by a listener at a given time and in a given situation". This means that the process of intelligibility will entail that the more words a listener can identify correctly when

said by a particular speaker, the more intelligible the speaker is. She considers the listener to be a native speaker who, when communicating with non-native speaker should feel reasonably comfortable in his or her attempt to understand the speaker (Da Silva 1999).

In the general field of L2 speech, Derwing and Munro (2009: 478-479) distinguish between intelligibility, comprehensibility and 'accentedness'. Intelligibility is defined as the extent to which a speaker's utterance is understood. Comprehensibility is operationalised in terms of the degree of difficulty involved in processing the speaker's message, as measured by subjective "perceived comprehensibility" ratings or listener processing times (1995), while "accentedness" is understood as the degree to which the pronunciation of an utterance deviates from a norm (Derwing and Munro, 1995; 1997). Furthermore, Derwing and Munro (1997, 2009) have also put forward the idea that intelligibility is not necessarily correlated with 'accentedness', i.e. a strong accent may or may not reduce speech intelligibility. Conversely, intelligibility and comprehensibility seem to be more closely related, while comprehensibility and 'accentedness' can be considered as two different dimensions (Derwing and Munro 2009: 479). Deterding (2013) argues that Derwing and Munro's classification only makes sense in an Inner Circe context where a norm is well specified, as it is not clear what accentedness would mean in many Outer Circle settings, a point that Munro himself acknowledges when he notes that 'the distinction between a foreign and a native accent is [unclear] in the context of nativized varieties of English…' (Munro, 2008:193).

In the field of World Englishes, Smith and Nelson's (1985) oft-cited proposal establishes a distinction between "intelligibility", "comprehensibility" and "interpretability". According to these researchers, the term "intelligibility" refers to the ability of the listener to recognise individual words or utterances; whereas "comprehensibility", refers to the listener's ability to understand the meaning of a word or utterance in its given context, and "interpretability", the ability of the listener to understand the speaker's intentions behind the word or utterance. Nelson (2011) discusses the three-way distinction in some detail by recounting an incident cited in Smith and Christopher (2001) in which an Australian woman visiting Turkey was having a friendly and successful conversation in English with a taxicab driver "until she asked him to turn off the interior light [in the taxicab]." The driver said "No!" The passenger followed her request, assuming there had been some kind of simple misunderstanding, and from that point the conversation gets worse, ending in a silent and decidedly uncomfortable arrival at her destination. As Smith and Christopher put it in their discussion of this interaction, "There seems no doubt that the Australian passenger's words were *intelligible* and *comprehensible* to the taxi-driver..." despite these criteria, the conversation was *uninterpretable* to both participants (Smith and Christopher 2001 in Nelson, 2008:303). This illustrates that identifying the interpretability of utterances is tough, as it is difficult to know the extent to which people understand the implications of everything that others are saying (Deterding, 2013). Pickering (2006) also notes that the concept of interpretability is hard to measure.

Jenkins (2000; 2002) building on the notion of intelligibility of Smith and Nelson (1985), offers her definition of intelligibility in the context of interlanguage talk

(ILT)[29] in an ELF context. Jenkins (2000a:78) defines intelligibility to mean "the production and recognition of the formal properties of words and utterances and in particular, the ability to produce and receive phonological form but regards the latter as a prerequisite (though not a guarantee) of ILT success at the locutionary and illocutionary level" (2002:78). Jenkins, in her study, acknowledges the adoption of Smith and Nelson's (1985) concept of intelligibility but she adds that her definition of intelligibility is approached more in the spirit of writers like Bansal (1969; 1990)[30] and Ufomata (1990a)[31], i.e. in terms of the purpose and contexts of use of English for both international and intranational contexts. Differences between Jenkins and Smith and Nelson arise from the emphasis they place respectively on either the importance of pronunciation or the relevance of pragmatic. For example, Jenkins (200a) argues that for learners involved in ILT, understanding is mostly compromised at the level of intelligibility due to pronunciation problems; however, Smith and Nelson (1985) argue that it is at the level of "interpretability" that is the most important. These differences could be due to the fundamental approach taken in assuming the role of English in discourse; i.e. for most of Smith's work, English is seen as being used in an international context and in cross-cultural communication situations that involve NSs and NNSs (i.e. between NS-NNS, or between NNS-NNS). For Jenkins

[29]Jenkins (2000a:19) uses ILT specifically to refer to "the speech of NBES (*non-bilingual English speakers*) from different L1s as they engage in interaction" and the purpose, rather than the result, of the interaction is ELF. The term was first used by Krashen (1981, 1982) and subsequently by Long and Porter (1985) and Ellis (1994), to describe the simplified linguistic code in which acquirers of second language speak to one another.

[30] Bansal's (1969) definition is based on phonetic and phonological criteria. He claims that to be intelligible; the speaker must articulate his sounds and words clearly; minimizing the hearer's efforts to understand what word is meant (1969:15).

[31] Ufomata (1990a) discusses mutual intelligibility of Nigerian English in relation to the role played by phonological forms and phonetic features. She maintains that it would be essential 'to identify areas which cause intelligibility failures within [the Nigerian] accents' (1990a:216).

(1995; 2000a;2000b) English is used as a lingua franca among learners of different first languages, and the involvement of the NS is disregarded, i.e. the NS is no longer an interlocutor or the adjudicator of norms on the English language that is used.

For this present study, "intelligibility", following Jenkins' (2000a) definition, is taken to represent the recognition of words and utterances as well as the ability to produce the appropriate sounds. Although "comprehensibility" and "interpretability" are also essential in order to fully comprehend the nature of "understanding", this study adopts Field (2004) and Jenkins' (2000) view that when most L2 and ELF speakers are engaged in receiving and producing sounds, they do not (for most of the time) engage beyond the level of recognising and deciphering the sound signals. They are likely to depend on a bottom-up[32] strategy of listening. One reason is that for NNS listeners making much use of the context underlying and surrounding the speech they receive at both linguistic and extra-linguistic levels is not easy and, accordingly, employing the top-down process can rarely be done in the same way they employ the top-down process in their L1s. This could explain the reasons behind prioritising segmental over suprasegmental features in some studies (Zoghbor, 2010; Jenkins, 2000; 2002). Segmental features include the consonant and vowel which is a smaller feature to start with in the process of bottom-up than the suprasegmentals like intonation

[32] There are two processes for perceiving speech: *bottom-up* and *top-down* (Brown, 1990). A bottom-up model assumes that we perceive speech by building up an interpretation in a series of separate stages, beginning with the lowest level units (the phonemic segments of words e.g. /b/, /ɒ/, /g/) and gradually working up to the larger units such as the utterance, from which we then derive our interpretation of the speaker's meaning (Anderson and 20 Lynch, 1988). This contrasts with the top-down processing 'which uses knowledge and expectancies to guess, predict, or fill in the perceived event or message' (Pinker, 1994:474).

which are more probably the first thing to consider in applying top-down processing. It is the bottom-up processing that is connected with the phonological code and with identifying which phoneme is being used. This is, after all, the raw data of language input – without this, there is no linguistic message. The effect of not being able to identify which vowel or which consonant is being used is that the listener will be unsure which word is being used unless there is enough contextual information to make this clear. Listeners who are able to use the phonological code competently have a good chance of recognizing most of the words intended by the speaker (Brown, 1990).

Nevertheless, NSs are more able to use a top-down process even with less phonological input because of their background knowledge of the language. According to Brown (1990), in everyday situations, even if the NSs do not hear everything a speaker says, the NSs have a good idea of the kind of things that would have been uttered, which they construct to some extent from the phonetic cues that they hear, and partly from their knowledge of what they would have said if they had been speaking. It might also be the stereotypic knowledge of what such a speaker is likely to say in such a situation. Familiar knowledge, which native speakers have been acquiring from infancy, allows them to cope with a much-reduced phonetic input. This familiar knowledge has many different names in the literature, for example, background knowledge, mutual knowledge and shared knowledge (Zoghbor, 2010).

Having considered the various definitions of intelligibility employed by different scholars, I will now turn to previous investigations carried out on intelligibility. The section is divided into two main subsections. First, key studies relating to the

native speakers' perceptions of non-native speakers' speech are provided. This is followed by the non-native perceptions of NNS speech.

4.3 Previous Studies on Intelligibility

4.3.1 Studies on Intelligibility of Non-Native Speaker's to Native Speakers (NNS-NS)

There has been a substantial increase in the literature investigating intelligibility of non-native speech from the perspective of native English listeners (Lane, 1963, Tiffen, 1974, Wang, 1987, Gallego, 1990, Anderson-Hsieh et al., 1992, Derwing & Munro, 1997, Hahn, 2004; Zielinski, 2008). In one of those studies, Anderson Hsieh et al. (1992), observed the relative contribution of segmental and suprasegmental features as they relate to intelligibility. The study examined the relationship between experienced SPEAK Test raters judgement of non-native pronunciation and actual deviance in segmental, prosody and syllable structure (1992:529). They found that overall prosody had a greater influence on pronunciation ratings for standardized spoken language test. In an earlier study, Anderson-Hsieh and Koehler (1988) also reported that their comprehension was hindered more severely by prosodic deviance than by segmental features. In a similar finding, Derwing, Munro, and Wiebe (1998) considered the effects of both segmental and suprasegmental instruction on learners 'comprehensibility ratings and showed that the suprasegmental had a greater effect on successful performance in communicative contexts.

In the Brazilian context, Cruz (2003) examined the pronunciation intelligibility of six Brazilian undergraduate students to native English listeners. The raters (native English listeners) identified several aspects of the pronunciation of Brazilian English that impede intelligibility. These include the use of [i] instead of /ɪ/, and word stress. Word stress was pointed out by the rater as the major source of unintelligibility.

Similarly, in the Nigerian context, Tiffen (1974) examined the intelligibility of educated Nigerian speakers of English to British listeners and analyzed the main causes of intelligibility failure. The study recorded 24 Nigerian speakers of English, 12 having Hausa as their first language (L1) and 12 with Yoruba as their L1. The recordings were played to two hundred and forty British listeners in a bid to measure the intelligibility of Nigerian Educated English to British speakers of English. The British listeners were asked to listen to the tapes and write down what they heard. Four major causes of intelligibility breakdown were identified, and their relative percentages were calculated: rhythmic/stress 'errors' (38.2% for all speakers) and mispronounced phonetic segments (33.0% for all speakers), phonetic errors (20% for all speakers) which included assimilation, mispronunciation of consonant clusters and metathesis, incorrect elision was recorded, and lexico-grammatical errors (8.8%). His conclusion reveals that suprasegmental errors are more serious than segmental errors. This finding is consistent with many studies (Palmer, 1976; Johansson, 1978 and Anderson-Hsieh et al., 1992; Hahn, 2004; Field, 2005; Rajadurai, 2006; Zielinski, 2008).

However, opposing results were found by some other scholars (Kashiwagi and Snyder 2008; Suenobu et al. 1992; Fayer & Krasinski, 1987; Yamane, 1992). In one of those studies, Kashiwagi and Snyder (2008) investigated the intelligibility of 20 Japanese female college students to three native speaking (NS American) and three NNS (Japanese) listeners. The 20 Japanese read two short passages each, which were recorded and presented to six listeners or judges who transcribed in standard orthography. An interview was held with the listeners to discuss the pronunciation features they perceived to be the cause of their misunderstandings. Their result showed that for both American and Japanese listeners', mispronunciation of a vowel was the most often cited reason for communication breakdown, which accounted for 139 (35.3%) of the total 393 identified reasons. Of the vowel errors, r-coloured vowels, and five other vowels; /æ /, /ɑ/, /ʌ/, /oʊ/ and /ɒ: / were most identified to have contributed to the reduction of intelligibility. Consonant error was the second most often cited reason for misunderstanding for both set of listeners and accounted for 94 instances (23.9%). Of the 94 consonant errors cited by the listeners were / r/, / θ /, / ð /, /f / and /v /. Both the native English speaking (American) and non-native speaking (Japanese) listeners reported suprasegmental errors to be less problematic in their comprehension, and a total of only 46 cases were identified in which suprasegmental errors were perceived to be the main cause of misunderstanding. 33 out of the 46 cases, were caused by irregular word stress or phrase stress (stress on noun compounds, adjective-noun phrases, and verb phrases), and the remainder 13 were due to lack of insufficient sentence stress on content words. Intonation, rhythm patterns, and features of connected speech were not cited to have caused misunderstandings by either of the two groups of

judges (Kashiwagi & Snyder, 2010:7). In a further study, Kashiwagi and Snyder (2010) verified their previous findings and confirmed that non-native pronunciation segmentals, particularly vowels affect most strongly the judgements of intelligibility (2010:1). The findings of some other empirical studies have been inconclusive (Munro & Derwing, 1995; Derwing & Munro, 1997).

All the studies reviewed above in this section have considered the intelligibility of different L2 accents of English only from the native speaker (NS) listener point of view or perspective (Tiffen 1974, Wang 1987, Lanham 1990, Ufomata 1990a; 2015, Munro and Derwing 1995). The aim of these studies has been to identify which non-native speakers (NNS) pronunciation errors hinder communication with NS (Anderson-Hsieh et al., 1992, Munro & Derwing, 1995) and the underlying assumptions of some of these studies are that native speakers are more important, appropriate, and suitable as a reference point to determine non-native speech than judgment from NNS; and that non-native speaker speech is not likely to be as successful as "purely 'native' speech communication" (van Wijngaarden et al., 2002:1906, in Osimk, 2009). Also, these studies have used the word "deviation", "errors" to categorise the difference between native varieties and non-native speech. For instance, Tiffen (1974:190ff) writes of "incorrect word stress, pronunciation errors, mispronunciation of consonants etc." This type of categorization shows that the non-native variety or features were still being considered as deficient and not different.

However, recent research has brought up another very significant perspective on the issue of intelligibility, that is, intelligibility of NNS as judged by NNS listeners (Jenkins, 2000, 2002, 2006, 2009, Seidlhofer, 2005, Deterding, 2005, Deterding

& Kirkpatrick, 2006, Kirkpatrick et al., 2008, Berns, 2008). As mentioned earlier, several scholars (Crystal, 2003, Graddol, 2006, Deterding & Kirkpatrick, 2006) have argued that English is likely to be spoken more between NNS speakers rather than NS and NNS due to the fact that people around the world have "chosen" English as the medium of international communication. Intelligibility should then be considered mainly from the point of view of this interlanguage talk (ILT)[33]. The next section will discuss various studies that looked at the intelligibility of non-native speaker's speech to non-native speakers.

4.3.2 Studies on Intelligibility of Non-Native Speaker's speech to NNS

Smith and Rafiqzad (1979) investigated the intelligibility of nine varieties of educated native and non-native speakers of English from Hong Kong, India, Japan, Korea, Malaysia, Nepal, the Philippines, Sri Lanka and the United States. Each speaker gave a ten-minute speech to a group of educated countrymen, and the speech was recorded. 1300 listeners or subjects from eleven countries: Bangladesh, Taiwan, Hong Kong, India, Indonesia, Japan, Korea, Malaysia, Nepal, the Philippines and Thailand listened to the nine speech samples. They listened to the taped prose passage and filled in cloze-procedure tests with the words they thought they heard, with mere inaccurate spelling not counted against their scores (1979:371-72). This method was adopted because Smith and Rafiqzad believed that intelligibility could be measured 'by constructing a cloze-

[33] Jenkins (2000a:19) uses ILT specifically to refer to "the speech of NBES (*non-bilingual English speakers*) from different L1s as they engage in interaction" and the purpose, rather than the result, of the interaction is ELF. The term was first used by Krashen (1981, 1982) and subsequently by Long and Porter (1985) and Ellis (1994), to describe the simplified linguistic code in which acquirers of second language speak to one another.

procedure test of the passage read and asking listeners to attempt to fill in the blanks of the test: the more words the listeners were able to write in accurately, the greater the speaker's intelligibility' (1979:371). Their findings demonstrated that native speaker varieties are in fact not as internationally intelligible as has generally been believed. This negates the traditional assumption that educated native-speaker speech is more likely to be intelligible to others than the educated non-native speakers. Native speakers were always found in their study to be among the least intelligible speakers when the subject listeners' responses were calculated with the average score of 55%. Smith and Rafiqzad did not make a remark on this, but the implication appears obvious: even though the native-speaker model had been presumed to be familiar to English learners globally, many, in fact, most of them were not well enough familiar with it to recognise a specific major variety when they heard it (Nelson, 2011). Some of the important findings were that only Japanese and Korean listeners found their fellow countrymen more intelligible than the other non-native speakers. The countries of the nine speakers based on the intelligibility averages in 11 countries, were as follows: Hong Kong 44%, United States 55%, Philippians 61%, Korea 68%, Nepal 72%, Malaysia 73%, Japan 75%, India 78%, Sri Lanka 79%. Another observation from the study was that listeners' in eight of the eleven countries averaged 30% or less incorrectly recognising the US speaker as an American while he was often identified by the Japanese (67%), the Indians (63%) and the Chinese in Hong Kong (40%). Based on their findings, they concluded that 'since native speaker phonology doesn't appear to be more intelligible than non-native phonology, there seems to be no reason to insist that the performance target in the English classroom be a native speaker' (1979: 380).

One may want to question the validity of their claims since not all the listeners had the chance to listen to the same passage. They stated that the same group of listeners could be used for all the listening selections (to listen to all the nine tapes) or a “different group for each one” (ibid: 373). If a different group of listeners in each of the countries listen to different tapes, then the inconsistency in the level of difficulty of the passages may affect the degree of intelligibility and the understanding of the speakers.

Moreover, recent studies gave similar findings to Smith and Rafiqzad’s. In one of those studies, Bent and Bradlow (2003) reported that non-native listeners might find L2 speech more intelligible than native speech, whereas the opposite might be true for native listeners. They observed the influence of the L1 on the intelligibility of English L2 speech as determined by listeners from the same and from different L1 backgrounds. Their subjects (listeners) were told to transcribe English sentences produced by high- and low-proficiency Chinese and Koreans, as well as Americans into English orthography. The listeners or subjects were Chinese, Korean, American, and a mixed group of non-native English speakers. Based on their findings, they discovered that the native English listeners (American English listeners) found native English talkers (American English speakers) to be most intelligible, this is not surprising. A somewhat surprising finding was that even where there was no shared native language, non-native listeners (in this case, Chinese and Korean) found high proficiency non-native talkers from different language backgrounds to their own to be as intelligible as native talkers. If an L1 were shared by both talker and listener, then even a low

proficiency talker was found to be as intelligible as the high proficiency non-native talkers and native talkers. Bent and Bradlow (2003) termed this advantage "*The Interlanguage Speech Intelligibility Benefit"* (ISIB). However, Bent and Bradlow used the term to mean that the native and non-native listeners were equal in understanding the non-native speech (Algethami et al., 2010). On the other hand, this definition has been questioned by Stibbard and Lee (2006) who argued that for a speech to be called an "advantage" or "benefit", the performance or score by the non-native listeners have to exceed their native speakers in understanding the L2 speech or non-native speech.

Many earlier studies gave similar findings that speakers from a particular L1 background might have an advantage in understanding accented utterances from speakers who share that background. For example, Smith and Bisazza (1982) carried out a study of three varieties of English to find out the possible effects of intelligibility on comprehensibility. Two hundred and seven subjects in seven countries, i.e. Hong Kong, India, the Philippines, Japan, Taiwan, Thailand and the United States, were told to listen to the recordings of one American, one Indian, and one Japanese, each reading different forms of the Michigan Test of Aural Comprehension and to answer the questions about what they had heard. Their results confirmed that the greater the familiarity a non-native speaker or a listener has with a variety of English, the more likely he/she will understand that variety. In their study, the Japanese subjects, who had been taught English by Japanese teachers, were better at comprehending the Japanese Speaker, while the Indian subjects, who had had a greater amount of exposure to American when compared with Indian English, found the American speaker to be more intelligible

than the Indian. On the contrary, Munro et al. (2006) found that native English listeners who had reported previous interaction with Polish-accented English than the other listener group (Cantonese, Spanish, Japanese) were not better at comprehending the Polish-accented speech. Smith and Bisazza's findings are consistent with those from Smith and Rafiqzad (1979). Also, Imai et al., (2005) study have reported similar conclusion. He found that L2 Spanish listeners yielded higher intelligibility scores than native listeners when they were both presented with Spanish-accented English.

However, Munro et al. (2006) found the benefits of interlanguage match between talkers and listeners to be inconsistent. For example, like the earlier studies mentioned above (Smith & Rafiqzad, 1979, Smith & Bisazza, 1982, Gass & Varonis, 1984, Smith, 1992, Imai et al., 2005), Munro et al. reported that Japanese listeners' showed benefit from an interlanguage match as they found the Japanese speakers to be more intelligible than all the three of the other speaker groups. In contrast, no benefit was found for Cantonese listeners and Cantonese speakers. The Cantonese and Mandarin listeners found the Japanese speech as intelligible as did the native Japanese listeners. Just like Munro et al., (2006), Major, Fitzmaurice, Bunta, and Balasubramanian (2002) suggest that the advantage in understanding accented utterances from speakers who share the same mother tongue is probably small and not consistently observable. In Major et al.'s study of 400 listeners, they reported that their Spanish listeners showed a small intelligibility advantage when hearing Spanish-accented utterances in comparison with other varieties, whereas the Chinese and Japanese speakers showed no similar advantage for their L1 accents. In fact, the Chinese listeners

in their study were disadvantaged when presented with Chinese-accented English as this hindered their comprehension. These findings appear to agree with Van Wijngaarden (2002a) who found that Dutch listeners did not benefit from hearing their “own” non-native accent (2002a:1909).

In a more comprehensive empirical research, Jenkins (2000, 2002) ground-breaking work is the major study that has been conducted on international intelligibility among NNS. The aim of her study was to investigate the phonological features that are critical for successful communication among non-native speakers in the context of English used as a lingua franca. She observed students from different language backgrounds engaging in classroom conversations. The interactions are based on information gap tasks that are part of the learners’ classroom practice. In her data, she observed that most cases of miscommunication (27 out of 40 instances of communication breakdown) were due to phonological differences with misplacement of nuclear stress being the greatest suprasegmental threat to intelligibility (Jenkins 2000: 45, 123, 87). An example of communication breakdown found by Jenkins in her data was the case of a Japanese speaker (A) describing a small set of pictures to a Swiss-German speaker (B). As Jenkins points out, despite only one picture containing cars, which were red, and no indication that they were for hire, the Japanese speaker (A) persists in “adjusting the context and/or co-text to bring them into line with the acoustic information rather than vice versa” (2000:90).

A**:** I didn’t understand the let cars. What do you mean with this?

B: let cars? *(Very slowly) Three* red [led] cars

A: Ah, red.

B: Red.

A: Now I understand. I understood car to hire, to let.

Ah, red, yeah, I see. (2000: 81)

In this example, communication breakdown resulted from the difference between Japanese and Swiss German phonological filters, in which the Japanese produced [led] for red, and the Swiss-German heard it as [let]. Based on her findings, the phonological features that caused a breakdown in NNS-NNS communication in her study were summarised in the Lingua Franca Core (LFC): a list of features of English pronunciation that are critical for achieving mutual intelligibility in ELF but at the same times permit substantial regional variation. These features included all consonant sounds except for the dental fricatives /θ/ /ð/ and dark /l/, vowel length contrasts, the mid vowel /ɜ: /, initial and medial consonant clusters, and nuclear stress. In contrast to these features, the dental fricatives /θ/ /ð/, the vocalised /l/, the quality of all vowels except the mid vowel /ɜ: /, final consonant clusters, rhythm, and the intonation tones were found to be unimportant for communication between non-native speakers. Although she proposed it, she did not present it as definitive. Instead, the idea was for more researchers to test and refine it to meet the intelligibility requirement for learners in different contexts as their needs for pronunciation will vary based on the differences in their first language (L1).

In Southeast Asian context, Deterding and Kirkpatrick (2006) employed a similar approach to Jenkins by describing the pronunciation features of an English

Lingua Franca that is emerging in 10 countries[34] belonging to English of the Association of Southeast Asian Nations (ASEAN). They focused on recordings of semi-structured conversations among speakers from the ten countries as understood by other Southeast Asian Nations. They reported that some pronunciation features used by ASEAN speakers did not hinder intelligibility. A breakdown of the non L1 English features that were shared among ASEAN speakers and that did not appear to hinder intelligibility included: the dental fricative substitution (that of [t] for / θ/ in think, thing) this was found among speakers from seven of the countries; reduced aspiration on initial plosives (that of the /t/ in *time*, which was pronounced [daɪm] rather than [taɪm]; monophthongal /ei/ and /əʊ/ (pronouncing *place* as [ple:s] and *take* as [te:k]; the insertion of the semivowel /w/ in triphthongs [our & hour] pronounced with a [w] between the syllables as [aʊwə] ; lack of reduced vowels (full vowel rather than a schwa vowel), stressed pronouns and heavy end stress. In five cases, non-shared pronunciation differences led to breakdowns in communication. Features that obstruct intelligibility included; a vowel substitution of /ɜː/ in *Pearl* for /ɑː /, a consonant deletion, /r/ was removed in *three* pronouncing as [ti:]; a consonant insertion pronouncing *us* as [ʌts]; and two consonant substitutions, (*holes* pronounced as [hounz] and *sauce* as [(ʃɔ:s]. Interestingly, these apparently confirm with Jenkins findings as Deterding and Kirkpatrick (2006), themselves reported that all five of those features were those found by Jenkins (2002) to have caused problems with intelligibility in her data which she included in the Lingua Franca Core (LFC).

[34] (Brunei, Thailand, Laos, Vietnam, Singapore, Malaysia, Indonesia, Cambodia, Myanmar, and the Philippines)

In the context of Hong Kong, Kirkpatrick et al. (2008) reported on the international intelligibility of six educated Hong Kong English speakers (L1 speakers of Cantonese). The speech samples that were obtained through recordings from these speakers were presented to two groups of university students in Australia and Singapore. Hong Kong English was found to be very intelligible to both Australian and Singaporean listeners in the international contexts. They reported in their study that all their speakers displayed distinctive pronunciation features of Hong Kong English like the use of voiceless labiodental fricative [f] for voiceless dental fricative /θ/; the occurrence of syllable-timed rhythm, and the relative absence of reduced vowels.

In the context of Japanese, Matsuura, Chiba, and Ara (2012)'s examined the international intelligibility of six Japanese speakers to 147 university students: 48 Americans, 31 Philippines, 29 Koreans and 39 Japanese. To see to what extent the Japanese accented speech was intelligible to the above-mentioned group of listeners, subjects were asked to listen to three passages read by six Japanese speakers of English and fill missing words in blanks in the passages after each sentence. Study results indicated that the four listener groups displayed striking similarities in the types of linguistic features that reduced intelligibility. Of all the deviations (use of wrong words, lack of proper sentence stress, shifted word stress, problems with consonants and problems with vowels) examined, "word substitution" most severely reduces listeners' intelligibility across the four language groups.

Another study with similar scope and methodology is the one carried out by Becker & Kluge (2014). They reported the international intelligibility of two Germans, two Americans, two Chinese speakers of Mandarin and two Japanese. Samples of recordings of reading text taken from the speech Accent Archive (Weinberger 2013) obtained from the above-mentioned speakers were played to 20 Brazilians Portuguese speakers of English at a university in Brazil. The text was played to the Brazil listeners twice; once to have an idea of what it was about and at the second time, it was played in segments to have time to transcribe. The listeners were told to indicate aspects that led to intelligibility problems. The Brazilian listeners analysed the speakers' speech and found that word-final devoicing and lack of consonant clusters for the Japanese were the cause of unintelligibility. They observed that the Germans, Chinese, and Japanese production of vowel or consonant sounds were the major cause of unintelligibility for the Brazilians listeners while the speech rate and rhythm were pointed out by the Brazilians as the second factor of unintelligibility for Americans.

This may be explained by Jenkins (2000) conclusion that "for EIL, and especially for NBESs (non-bilingual English speakers), the greatest phonological obstacles to mutual intelligibility appear to be deviant core sounds in combination with misplaced and/or misproduced nuclear stress" (2000:155). She notes that the research showing the importance of suprasegmentals in intelligibility has been based entirely on NS listeners, who may process speech differently from NNSs. In her data of intelligibility in interlanguage talk (NNS–NNS from different L1), she found that the majority of communication breakdowns were due to segmental errors (or segmental combined with nuclear stress errors). These were the most

difficult problems to resolve because NNSs, even at relatively high levels of competence, still process speech primarily using bottom-up strategy of listening (a tendency in information processing in which smaller units are recognised first and are progressively reshaped into larger unit) and seem unable to compensate for pronunciation errors by using contextual or syntactic information, especially in situations of processing overload. The reason is that for NNS listeners making much use of the context underlying and surrounding the speech they receive at both linguistic and extra-linguistic levels is not easy and, accordingly, employing the top-down process can rarely be done the same way they employ the top-down process in their L1s. This concept of non-natives' reliance on bottom-up processing in situations of processing overload has frequently been claimed and cited by language researchers (e.g. Field 2004).

To the best of my knowledge, the intelligibility of Nigerian English has not been the focus of research. Tiffen's (1974) study is the only major large-scale work that has been carried out on the intelligibility of Nigerian speakers of English. But his study prioritises native English speakers (in this case British listeners') as evaluators of Nigerian speakers of English probably because the study was carried out some decades ago. In other words, it has traditionally overlooked the way Nigerian English is perceived by other non-native listeners in international contexts. However, given the change in the use and users of English in the world today as mentioned earlier, the current study is designed to address this gap in the research by also investigating the intelligibility of Nigerian speakers of English as determined by other speakers of English with different L1s including speakers of the dominant languages in Nigeria, Hausa and Yoruba.

Before moving to the next chapter, I shall briefly discuss the problems of language use.

4.4 Received Pronunciation as a point of Reference, not a Norm

In this study, pronunciation features that “differ” from Inner Circle norms (RP in this case) are not referred to as “errors” or “deviations”, but as “differences”. This is reflected in the choice of language used in presenting my analysis (See Chapter six). In analysing my data, I realised that there was a tendency to echo the hegemony language that researchers (Tiffen 1974; Atoye, 1987; Cruz, 2008; Kashiwagi and Snyder 2008; Egwuogu, 2012; Fakeye, 2017) often associate with Standard English such as RP. In moving away from this stance, I have adopted, wherever possible, a more neutral non-judgmental language. For example, I used terminologies such as “distinct pronunciation”, “vowel variant”, “differences in vowel”, “alternatives to the reference accent”, instead of “vowel substitution or vowel mispronunciation”, “different stress pattern or L1 stress pattern” in place of “stress shift or wrong stress”, “differences in vowel length” rather than “lack of phonemic length distinction”, “differences in consonant” instead of “consonant substitution or consonant mispronunciation”, “non-realisation of consonant or non-use of consonant” instead of “consonant deletion or omission”. In cases where it is not possible to maintain a neutral non-judgmental language, I have resorted to the hegemonic language commonly used by researchers as a convenient set of labels and should not be interpreted as a judgmental label.

Chapter Five
Methodology

5.0 Introduction

This chapter discusses the methodology employed in the research and the ethical as well as other challenges that confronted me during the field work. The chapter is divided into three sections. The first section discusses the methodological approach. Here it presents a description of research methods adopted in previous intelligibility studies and the method used in this present study. The section further considers the material used to measure intelligibility with its justification. The recruitment process follows with particular attention to its challenges and description of participants.

In the second section of the chapter, the pilot study for this research is discussed, with close attention given to how it has reshaped the test materials and instruments used in the study. Finally, the last section presents a brief description of the scoring system and method adopted in analysing the data.

SECTION ONE

5.1 Research Methods and Test Materials Adopted in Past Intelligibility Studies

Any researcher examining the concept of intelligibility is confronted with the major problem of measurement (Munro and Derwing 1995, Pickering, 2006). Munro (2008), in a literature review on foreign-accented speech, highlights the diversity of instruments used in measuring speech intelligibility, as well as the difficulty in eliciting appropriate speech samples. This section briefly highlights some of the methods adopted in investigating intelligibility, with respect to the instrument, procedures utilised for the collection of data as well as the speech samples used in assessing intelligibility.

5.1.1 Methods Adopted to Assess Intelligibility

A range of different methods has been used to assess intelligibility even though none seems entirely suitable. In L2 speech studies, one of the methods used in assessing intelligibility is impressionistic subjective assessments such as rating scale judgement (used in Derwing and Munro 1995; 1999). This method allows listeners to make explicit judgments about the speaker's (overall) speech intelligibility by assigning numerical values to samples of speech. This technique is relatively quick and easy but is inevitably rather subjective, and it does not offer information about the types of pronunciation features that may cause intelligibility problems (Angel, 2013; Hardman, 2010; Munro et al., 2006).

Another subjective assessment is the "pressing the buzzer technique" (Kenworthy, 1987). This technique entails listening to a speech and pressing a

buzzer or switch to stop the speech when listeners do not understand something. The words they stop at are regarded as an index of speaker intelligibility (Kenworthy, 1987). This technique is less time-consuming than the writing procedure. However, it is not always an adequate technique for two reasons: the first is that in cases where several listeners are listening to the same speech, the researcher will be unclear about who has pressed the buzzer (Kenworthy, 1987). The second reason is that when a listener encounters a problem understanding the speaker's utterance, he/she might not press the buzzer, but let the unrecognised utterance "'pass'" on the (common-sense) assumption that it will become clear through the clues which the listener might collect as the talk progresses[35] (Kenworthy, 1987, Zoghbor 2010). The listener might also not press the buzzer due to another reason rather than the 'let it pass' strategy. Brown (1989a) argues that a listener may understand a speaker as having said something different from what he/she intended. This may cause greater confusion than instances where the 'let it pass' strategy was implemented as in the case introduced by Brown (1989a) the listener is often unaware that a breakdown in understanding has occurred. In other words, the buzzer technique might undergo inaccuracy in developing the required record for the unrecognised elements of the speech.

The next method of assessing intelligibility is the cloze task used by Smith and Rafiqzad (1979). With this method, listeners are asked to fill in the blanks in a

[35] This is referred to as the 'let it pass' strategy which is commonly-deployed in (but not restricted to) lingua franca interaction (Firth, 1996). The "let it pass" strategy was first introduced by Firth (1996:243) to describe a strategy that a hearer adopts when facing problems in understanding a speaker's utterance and "lets the unknown or unclear action, word or utterance pass on the assumption that it will either become clear or redundant as talk progresses." The effect of a "let it pass" strategy can lead to the listeners ignoring the problematic utterance/word altogether (Firth, 1996; Kaur, 2009).

cloze task while they listen to read utterances. For example, in Smith and Rafiqzad (1979)'s study, subjects heard a recording of passage and filled in cloze passages while following along with the readings. 'Being able to approximate representation of sounds heard by writing them down was counted as a successful demonstration of intelligibility' (Kachru and Nelson, 2006:67). This is the same kind of procedure that was followed in Matsuura, Chiba and Fujieda (1999) who devised a cloze procedure dictation exercise to test the intelligibility of American and Irish English speakers in Japan. The dictation test used in their study was a partial dictation (cloze task), in which there were only ten blanks, or only ten words, to be identified. The number of words transcribed using the cloze test was fairly limited. This kind of test would give away contextual clues to listeners, and they may well be able to achieve high scores on the cloze test without even hearing the audio tape. Thus, to measure intelligibility more strictly, Matsuura et al., (1999) in their study have suggested that future research should include a word by word dictation exercise.

In a word by word dictation exercise (used by Gass and Varonis 1984; Munro & Derwing 1995b; Derwing and Munro 1997, Bent & Bradlow 2003; Munro, Derwing and Morton, 2006; Kashiwagi, Synder, and Craig 2006; Osimk 2009), listeners hear read utterances and are asked to transcribe them; the number of words they correctly transcribe is regarded as an index of speech intelligibility. For example, Bansal (1969:55) used a word for word dictation method to examine how intelligible Indian English speakers were to NNs and Ns listeners. Each word and sentence was played, and listeners were required to either repeat orally or write down what they had heard. Also, in Munro et al.'s (2006) study, the subjects

(listeners) were asked to ‘transcribe the 48 utterances into standard orthography’ (2006:118).

The present study employed the use of the word by word dictation method for the following reasons. Firstly, this method enables the researcher to investigate more precisely mismatches between the speaker recordings and the listeners’ transcribed text. That is, the listeners would reveal to the researcher all the words or phrases he had not understood. Secondly, it presents more permanent and easily verifiable records for further study and analysis (Tiffen, 1974; Atechi, 2004; Munro et al., 2006; Deterding, 2013).

However, the use of word by word dictation (transcription) method to measure intelligibility is not without its limitations. This kind of method does not usually take into consideration the context of the situation (Osmik, 2009). But, since the sample of speech presented to listeners in the present study were broadcast/television materials (podcasts) meant for general consumption, it became possible to overcome (or to some extent reduce) this drawback as television materials provide context.

In the following section, I examine the speech material employed in various past intelligibility studies. In doing so, I observe some of the general advantages and disadvantages of using such materials, and I finally discuss the material adopted in the present study.

5.1.2 Intelligibility Test Material

Many of the past intelligibility studies have differed regarding the techniques used in eliciting non-native speech samples from speakers. For example, speech materials range from: (1) scripted materials such as word lists (as used by Tiffen, 1974; Irvine, 1977; Suenobo, Kansaki & Yamane, 1992; Bent & Bradlow, 2003), sentences (as used in Osimk, 2009; Cunningham, 2012), passages (as used by Smith and Rafigzad, 1979; Smith and Bisazza, 1982; Suenobo, Kansaki & Yamane, 1992; Munro & Derwing, 1995; Major et al., 2002; Kashiwagi and Synder, 2006; 2010; Chen, 2011; Matsuura et al, 2012; Becker & Kluge, 2014); (2) unscripted materials such as spontaneous speech (used in Bansal, 1966; Tiffen, 1974; Matsuura, Chiba and Fujieda, 1999; Munro, Derwing & Morton , 2006); interviews (used in Albrechtsen et al., 1980; Wang 1987; Deterding, 2005; Kirkpatrick et al., 2008), interactions (as used in Varonis & Gass, 1985a; Smith, 1992; Jenkins, 2000; Deterding and Kirkpatrick , 2006) and unscripted material from television and radio programs (as used by van der Walt, 2000). The following sections will discuss the advantages and disadvantages of each technique used to elicit speech sample for intelligibility research.

Scripted materials

- Word List and sentences

Speech samples elicited through the reading of word list, and sentences may be an ideal test for measuring the intelligibility of discrete sounds in words. This is because it offers control over the content or the lexical items to be included in the utterances. However, the measurement of intelligibility by such a test does not

seem to go beyond the phonemic level (Wang 1987). Also, Bansal (1969) raised objections to the use of recorded “read words” and “read sentences” on the grounds that hyper-articulated speech and spelling pronunciations will be used, reducing the authenticity of the samples. Another possible methodological problem with using speech samples elicited through the reading of word list, and sentences in accent studies is that some listeners will also realise that the experiment is designed to measure their reactions to particular features and by focusing on these it is more likely that they will react to the feature, and its stereotypical association, rather than the speech sample as a whole (Sewell, 2010).

- Reading passages

There are intelligibility studies that rely on using recordings from read passages (For example, Smith and Rafigzad, 1979; Smith and Bisazza, 1982; Suenobo, Kansaki & Yamane, 1992; Munro & Derwing, 1995; Major et al., 2002; Kashiwagi and Synder, 2006; 2010; Chen, 2011; Matsuura et al, 2012; Becker & Kluge, 2014). For instance, Mastuura et al. (2012) examined the international intelligibility of six Japanese university students to a total of 147 university students from the US, the Philippines, Korea, and Japan. Three prepared passages taken from EFL textbooks were read aloud by the six Japanese speakers. Each speaker read a whole passage allocated in a recording session, half of a passage was employed for a cloze task dictation (e.g., Speaker 1 read the first half of Passage 1, Speaker 2 the second half of the same passage, Speaker 3 the first half of Passage 2 and speaker 4 read the second half of passage 2), and as a result, a total of six speech samples were made. After each

speech sample, 147 university students listened and completed a partial dictation task.

Speech samples elicited through passage reading reduces the amount of linguistic variation in samples. That is, it offers control over the content or the lexical items to be included in the utterances. However, the method is not without its disadvantages. A possible methodological problem with using passages is that reading aloud is a skill that induces a more careful pronunciation. Wang (1987) claims that the ability of a non-native speaker to read a passage aloud 'depends to some extent on how much he can comprehend the passage' (1987:68). If the reader focuses too much on the graphic elements, the way he/she reads will be to a certain extent different from the way he/she speaks in real life situation. Moreover, reading and speaking are such different skills that the stress and intonation patterns used in reading are bound to differ from those employed in typical speech. Besides, as tone grouping or pause phenomena in reading may depend considerably on the reader's degree of comprehension of the passage, as they also do on the punctuation and lineation of the written text, they are likely to be even more different from his or her usual speech (Tiffen, 1974). Thus, an approach that uses unscripted, spontaneous speech samples is more likely to reflect actual performance features.

Unscripted materials

Spontaneous speech

There are also intelligibility studies that rely on less restrictive elicitation techniques. For example, Derwing & Munro, (1997) and Munro et al. (2006)

extracted utterances from narrative obtained from participants who were asked to describe a cartoon story while they were recorded. The difficulty with this is that the participants' vocabulary tends to centre around that topic only, and there is no way to find out how well they can communicate in actual situations (Wang, 1987). Jenkins (2000) looked at intelligibility based on interactions that were elicited by several information gap tasks in a language classroom situation. Firth (1996) analysed telephone conversations between employees of Danish companies and their foreign partners; Deterding & Kirkpatrick (2006) recorded in a language laboratory the conversation data from groups of four in which each speaker came from a different Association of Southeast Asian Nations (ASEAN). Deterding (2005) employed an interview between a lecturer and a student; Kirkpatrick et al. (2008) in examining the intelligibility of Hong-Kong English speakers to two groups of Singaporean and Australian listeners, recorded and used interviews of well-educated speakers of English from Hong-Kong.

The use of spontaneous speech has its limitations. First, Rajadurai (2007) argues that the problem with unprepared speech elicited and recorded in a language laboratory is its reliance on artificial and unnatural data. From all we know about sociolinguistics, the recording technique and the presence of an authority figure (the researcher in most cases) are very likely to encourage "attention paid to speech" (Labov 1972) which might cause the subjects to adjust their speech in the direction of greater formality and "correctness", which may affect precisely the phenomenon under investigation.

Secondly, Kashiwagi et al., (2006) argue that in natural situations, L2 intelligibility may potentially be affected by several variables that go far beyond the phonological features of the accent. Some of these variables are grammatical and lexical complexity, speech rate and fluency markers such as pausing and rephrasing and discourse context (Sewell, 2010). Moreover, another limitation is that spontaneous speech does not offer absolute control over what lexical items would be expected in the utterances to be presented to the listeners (Algethami et al., 2010).

Therefore, to minimize researcher intrusion, via observation and recording, in the whole process, the present study uses recordings of speakers on television and radio programmes (broadcast material or podcasts) meant for general consumption which is not a scripted speech and that takes place in a genuine communicative context rather than speech samples elicited and recorded by the researcher.

Broadcast materials (such as speech samples from radio or television programmes) offer several advantages: authenticity, mainly unscripted speech (although this depends on the genre); a wide range of speakers and topics; the absence of an “observer effect” in so far as there is no experimenter present; and ease of recording. Also, Sewell (2010) argues that studio recordings are thought to be ideal because of the low level of background noise. The effects of noise have been documented in both L1 and L2 speech, as well as across a wide variety of different populations. In speech pathology, negative effects of noise for segmental perception have been reported in multiple studies (e.g. Dubno, Dirks

and Morgan 1984). The negative effects of noise on intelligibility for foreign-accented speech were also analysed by Rogers, Dalby and Nishi (2004). In a study of the international comprehensibility of five varieties of English in South Africa, Van der Walt (2000), reaches a similar conclusion: 'recordings of television and radio broadcasts meant for general consumption were found to be the most authentic type of communication that could be accessed, recorded and repeated (for subsequent testing) with relative ease' (2000:142). She provides criteria for selection of excerpts from television and radio programme:

1. the message must be part of a communicative event which provides its context (in this case both the context of the communication created by interviewers and interviewees on radio and TV and the context of the viewer as audience and interested listener);
2. the message must be directed at a receiver whom the speaker assumes listens for a reason (radio and television programmes deal with topics regarded as interesting or useful for that audience (Van der Walt 1999:11 cited in Van der Walt, 2000:142).

5.2. The Speech Material Adopted in the Present Study.

As mentioned earlier, in the search for 'authentic communication situations' (Van der Walt 2000:142), the most suitable speech material seems to be television and radio broadcasts (podcasts) meant for a wider audience, which is not scripted speech and takes place in genuine communicative contexts. The use of genuine communicative contexts suggests that the speakers are focused on the content of their speech, further reducing the "observer effect" and the threat of speakers

self-consciously modifying their speech, either in response to being recorded or because of the influence of spelling pronunciation experienced in scripted text. The speech materials used in this present study to measure intelligibility consist of six podcasts:

1. Funke Akindele's (a Nollywood TV star) interview on FAB radio about her recent movie production titled "Jenifa";
2. An international (UNESCO) panel conference held in Paris with Wole Soyinka. The Panel is composed of well-known intellectuals, political and religious leaders from all continents;
3. the Africa- China business relations interview with Olusegun Obasanjo;
4. Bukky Wright's (a Nollywood TV star) interview with Goldmyne TV;
5. Babatunde Fashola's interview about the prospect of Lagos state on an international TV station and
6. Wole Soyinka's interview on a visit to South Africa to present his memoir, *You must set forth at Dawn*.

One noticeable challenge experienced with the use of podcasts from television and radio programmes as speech samples for this study is its inability to completely represent the "interactional construct between speaker and listener" (Smith, 1992:76). It conceptualises intelligibility as a one-dimensional construct. That is, it does not fully represent the interactive nature of talk constantly negotiated between speakers and listeners. Nevertheless, by using this approach, my study offers some insights about the processes of cross-cultural communication that may have been difficult to achieve with other approaches. For instance, while a face to face communication or interaction, which is more multi-dimensional in nature may have reflected the interactional process between

speakers and listeners, this may not have given so many instances of intelligibility breakdown. This is because, in interactions where a listener encounters a problem in understanding the speaker's utterance, he/she might let the unrecognised utterance "pass", on the assumption that it will become either clear or redundant as talk progresses (Smith 1992; Kaur, 2009).

The second possible criticism is that although media English reduces one kind of observer effect through the absence of the researcher, it introduces another in the form of an 'audience effect' (Sewell, 2010). The speakers may have been 'designing' their speech, using the term of Bell (1984), for the audience. However, the threat posed by audience design is not a serious disadvantage for this study because 'speakers can only accommodate as far as their phonological and articulatory systems will allow' (Sewell 2010:129).

In addition, another criticism of television and radio programmes (such as podcasts) as a source of samples of naturally occurring language is that they represent a somewhat "artificial context of use". Despite the promise of genuine communicative contexts, the main target audience of a programme such as "the UNESCO panel meeting" will presumably be political leaders or UNESCO audience, not necessarily the mass audience. This criticism is not a serious disadvantage for this study for two main reasons: firstly, listeners who are more likely to operate at a global level in their future employment may have to listen to speakers similar to the ones used in this study. Secondly, the podcasts presented to listeners represent a range of topics, speakers and potential audiences.

Six criteria were adopted in selecting the podcast excerpts used in the study. Firstly, they had to present spontaneous speech not rehearsed (scripted) speech. The speech samples had to represent the language use typical of the speaker in real life situations; secondly, the excerpts had to contain words or sentences that included as many phonological features of the Nigerian English variety as possible as described in the literature (Banjo 1971, Jibril 1982, Bamgbose 1982, Ufomata 2015, Awonusi 2004); thirdly, the topics on which these speakers spoke had to be interesting to sustain listeners' attention; fourthly, the excerpts had to be short so as to avoid listeners fatigue while listening and transcribing. Longer samples were thought likely to reduce listener concentration, given that in the study six samples were provided. There was also the danger that longer samples might overload the listeners' memory.

Also, samples with prominent syntactic and semantic errors were also avoided in the selection process. In order to control the effect of syntactic and semantic errors that are often associated with spontaneous speech, attention is paid to the educational qualifications of the speakers while selecting the podcasts used. The speakers who provided the speech samples in the podcast are all advanced Nigerian English users (see Chapter 3 section 3.4). Finally, the podcasts must be from communications on international media and the message in the podcast must be directed at an international audience. It could be argued that by agreeing to appear on international television and radio, the speakers have an important role and impact in mass communication and a significant presence on international platforms. They represent the Nigerian state in organisations such as the United Nations (UN), United Nations Educational Scientific & Cultural

Organisation (UNESCO), and Commonwealth meetings. They also appear in informal settings as the case of the interview of the two Nollywood TV stars that was used as speech samples in the study.

Having discussed the test materials used in the current study, I present the speakers who provided the data elicitation materials and the reasons for choosing these speakers.

Speakers and selection

Table 5.1 below shows a description of the background information of the six Nigeria Yoruba speakers whose talk (studio recordings) provided the speech material for the study.

Speaker No.	**Gender M/F**	**Age**	**Profession**	**Source and context of recording**	**Educational Background**
One	F	38	Actress	FAB Radio Aug 2013 (studio interview)	Law graduate
Two *	M	80	Prof./diplomat	UNESCO, February 2010 (interview at panel conference)	University academic
Three	M	74	Politician	CCTV Africa June 2013 (studio interview)	Military & government officer
Four	F	48	Actress	GoldmyneTV Oct 2013 (studio interview)	Economics graduate
Five	M	51	Politician	CNBC Africa 2013 (interview)	Law graduate
Six* [36]	M	80	Prof./diplomat	CNBC Africa 2010 (studio interview)	University academic

[36] * 'Speaker two' and 'Speaker six' is the same person.

It was also hoped that the samples would provide equal numbers of male and female speech samples, but the podcast viewed had fewer female participants that met the selection criteria. Two of the six recordings, number two and six, were of the same person. The speaker was talking to two different kinds of audiences (UN audience and Media audience) on those occasions.

Reasons for speaker selection

The choice of all speakers is not intended to be representative of all Nigerian Yoruba speakers; rather, it serves as a reflection of an elite subgroup of the population. Two reasons informed the choice of speakers. The main reason was that regardless of their identity as native Yoruba language speakers, the selected speakers are listened to by a wide audience both nationally and internationally. Thus, all five speakers, irrespective of their profession have a significant role and impact in mass communication and a significant presence on international platforms. Therefore, it is expected that communication for them would encompass international audiences and so they are expected to be intelligible to a very wide audience.

For example, speaker two who also provided sample six gave the Reith Lecture (a series of annual radio lectures given by leading figures of the day) and broadcast on BBC Radio 4 in 2003 and, 2004. He has spoken at various international organisations (such as the United Nations) where he is identified as a “Nigerian Nobel Laureate for literature (1986)”, and he is a diplomat.

The third speaker has played a key role in the redevelopment and repositioning of the African Union. He represents the Nigerian state in organisations such as Economic Community of West African States (ECOWAS) (see Appendix 8).

The fifth speaker is the minister of power, works and housing of Nigeria. He was twice the governor of Lagos state, the commercial capital centre of the federal republic of Nigeria. As the governor of Nigeria's economic capital, he has conducted and attended several international business meetings, conferences, interviews, and speeches directed to the international audience.

The remaining two speakers (speaker one and four) are two Nollywood TV actresses. They have been included in the selection because of their social impact on media, culture and language. Nollywood video films have stretched even to the Caribbean, Black Americas and Europe (The Nollywood film industry and the African Diaspora in the UK website). Moreover, Nollywood, which originated in Nigeria has swept into Cameroon, the Caribbean, and Ghana. Currently, Nollywood actors and film producers have started making movies in the USA. African movies, mainly the Nigerian ones, are viewed on the DSTV channel called "Africa Magic" covering a wide range of audiences.

The second factor that determined the selection of these speakers was a consideration of their native language. All of them are Yoruba speakers. Preference was given to the Yoruba language because of its significance and reach. It is one of the three national languages used in Nigeria, and it is also used

by a major ethnic group in Nigeria. Also, I am a native speaker of Yoruba language, and it is much easier for the research to be conducted using Yoruba.

In the section that follows, I discuss the process of recruiting participants and the description of participants that took part in the study.

5.3 Recruitment

This section discusses how participants were recruited for the study. Two groups of participants were recruited: international listeners (made up of non-Nigerian speakers of English) and Nigerian listeners. The first section discusses how international listeners were recruited while the second section considers how Nigerian listeners were recruited for the study.

5.3.1 Recruiting International Listeners (IL)

Two different criteria were used in selecting international listener participants. First, they had to be advanced English users, either undergraduate or graduate in order to ensure that they had reasonable competence in English. Based on the findings by Eisenstein and Berkowitz (1981) and Matsuura et al. (1999), non-native listeners with low proficiency may not be able to deal with intelligibility (dictation) tests. The intelligibility scores of Matsuura et al.'s listeners failed to show significant differences between Irish and American English stimuli, even though the perceived comprehensibility ratings indicated that those listeners perceived American English as easier to comprehend than Irish English. Similarly, Kachi (2004) discovered that L2 listeners' oral proficiency levels had a significant effect on their listening comprehension. In order to control the effect of listeners' English proficiency level, all speakers of English from different

linguistics backgrounds participating as listeners in this present study were required to have 7.0 score in International English Language Testing System (IELTS) or its equivalent, with 7.0 score in Listening, speaking and writing. This was considered to be essential because it ensures that the researcher gets reliable intelligibility test data in this present study.

Secondly, listeners were not selected if they had prolonged experience communicating with Nigerian speakers of English. Gass and Varonis (1984) argue that familiarity with a non-native speaker's speech, a particular accent and a particular speaker all influence intelligibility. Thus, none of the international listeners in the present study had resided in Nigeria although a small percentage of them had spoken to African speakers of English in places like schools, hospitals, restaurants and other places. Many studies conducted on intelligibility have also demonstrated that familiarity stands out as one of the key factors that foster intelligibility. A case in point is Matsuura's (2014) study, in which the findings show that a less familiar accent (Indian English) was more difficult for Japanese listeners to comprehend than a more familiar North American English accent. However, some other studies offered only partial support for this hypothesis. For example, Spanish – Chinese- Japanese and American accented English were studied and compared by Major et al. (2002), who found that while Spanish speakers better understood their accent in English, the Chinese and Japanese listeners understood the Spanish speakers' accent better than they did their own.

I recruited most of the international listeners from the University of Roehampton in London due to the large international student population there and for convenience purposes. As participation in this study was voluntary, the international listeners were recruited from a wide range of departments or subjects of study (see Appendix 5). My initial aim was to get a large sample size and a suitable set of subsample sizes; 10 participants each drawn from twelve nationalities: American, British, Chinese, United Arab Emirate, South African, Brazilian, Thai, Ghanaian, Japanese, Spanish, Indian and South Korean. The idea here was to use speakers coming from countries with which Nigerians usually have business interactions in English. Smith and Nelson (1985) point out it is unnecessary for every speaker of English to be intelligible to every other speaker of English, but that we do need to be intelligible to those with whom we are likely to communicate in English with. In reality, however, due to the difficulty experienced in recruiting participants for the study, I had to include several other nationalities. It did not matter where the listeners come from because increasingly NNS-NNS interaction[37] is random.

I encountered two major challenges during my data collection. The first challenge faced was in recruiting suitable participants who would be willing to attend a listening session for forty-five minutes. It was difficult recruiting non-Nigerian speakers of English who would participate in this study. Due to this problem, I employed more than one technique in recruiting my participants. For instance, I contacted the International Offices and Course Administrators of various departments at the selected university asking them to help recruit students. I sent

[37] NNS-NNS refers to interaction between non-native speakers of English

email notifications via the students' university email account, made poster adverts which I posted on university public notice boards and sent out recruitment letters to students requesting their participation. Inevitably, the selection of subjects was limited in part to their availability and willingness to participate. I also recruited individuals one on one at the student café, union bar, and other social gatherings. This technique yielded positive responses as I recruited about fifty-five students.

However, this method did not yield enough students for the study, so I strategically attended various undergraduate and postgraduate lectures five minutes before the end of the class to announce my research to the class and signed up students who showed an interest. I had about seventy students signing up from various classes. This brought the total number of recruited participants to 130 listeners.

During the recruitment process, a language background questionnaire (see Appendix 3) was distributed to participants to ensure that they met the criteria for participating in the study. The following factors in the research literature were found to affect intelligibility and comprehensibility ratings: (1) speakers' L1; (2) age of starting L2 learning; (3) period of residence in a target country or length of residence; (4) formal instruction; (5) speaker's gender, (6) L2 proficiency level, (7) age of arrival in the L2 environment, (8) familiarity with a particular accent, (9) familiarity with foreign-accented English and (10) familiarity with the topic (Derwing and Munro 2009; Kennedy and Trofimovich, 2008; Piske, Mckay, and Flege 2001; Gass and Varonis 1984, Flege, Munro and Mackay 1995). In order to neutralise the effect of some of the above factors, the questionnaires were

designed to provide details of any hearing difficulty, familiarity with Nigerian English, English proficiency level, the age of first instruction in English, place lived between 2 and 10 years of age, and details of any working language used.

Based on the feedback from the questionnaires, none of the participants had regular contact with Nigerians, and they did not report on any long or short term stay in Nigeria. As far as knowledge of working languages is concerned, 60% of the recruited listeners (78 listeners) do not have any working languages while 40% of them (52 listeners) indicated that they had working languages. In terms of English proficiency, none had less than 7.0 overall band in IELTS (with 7.0 in listening, speaking and writing) while in terms of their speech or hearing impediments, 30 listeners reported hearing impediments. It is worth pointing out that these 30 listeners were excluded from this study and this brought the total number of international listeners to 100 participants.

The second challenge encountered during recruitment was in arranging listening sessions. The question of whether group or individual listening sessions should be held was considered. Initially, the plan of the study was to hold a group listening session so that a larger number of responses would be collected from participants at the same time and this would save much time. However, some scholars (Tiffen 1974; Wang 1987) argue that the reason against holding a group session is the difficulty of getting all the listeners together at once and my experience at the fieldwork confirmed this. Most students had classes to attend on most days, and they had different schedules which made assembling a group difficult. Moreover, finding a good soundproof room with adequate acoustic

conditions was difficult. Without these facilities, those listeners who sat far from the audio-recorder might have problems hearing distinctly. Therefore, I decided that individual sessions should be conducted in the UK rather than group sessions. The case Tiffen (1974) holds against conducting an individual listening exercise is that it consumes too much time. Each sitting lasted approximately 45 minutes, and 100 individual sessions were conducted to obtain data from international listeners.

5.3.2 Recruiting Nigerian Listener participants

Three different criteria were used in selecting Nigerian listener participants. First, Nigerian listeners were acceptable if they had, at least, a credit pass in English language in the West African Secondary School Certificate Examinations (WAEC). Secondly, the listeners had to be advanced English users: undergraduate or graduate students in a Nigerian university, in order to make the educational level similar among the listeners that participated in the study. Thirdly, the listeners had to be speakers with Hausa or Yoruba as their mother tongue because the two language groups combined represent about half the population of Nigeria and thus form an important cross-section.

It was much easier getting participants together to listen to the audio podcast in Nigeria. This was because a senior lecturer at Kwara State University introduced me to student representatives who assisted in recruiting students to participate in the research. In some cases, the lecturer looked out for students in the department to take part in the study. Forty-two listening sessions were held among the Nigerian listeners; forty individual listening sessions and two group

sessions. In the first group session, data were obtained from six listeners while in the second group session; data were collected from four listeners. This brought the total number of data obtained from Nigerian listeners to fifty responses.

The next section describes all the participants that took part in the study.

5.4. Participants

Listener participants and Research Site

A total of 150 listener participants took part in the study. The listeners made up two groups. The first group was comprised of 100 non-Nigerian speakers who formed the International listeners' group while 50 Nigerians (25 Yoruba and 25 Hausa) formed the second group called Nigerian listeners' (NL). The number of listeners that were used in this present study are in the same range with those that have been employed in previous studies. For instance, Matsuura, Chiba and Fujieda (1999) used 106 listeners, Munro and Derwing (1995) used 20 listeners, and Smith and Bisazza (1982) used 207 subjects in seven countries while in Van der Walt's (2000) study, there were 140 subjects with 16 first languages. The International listeners who took part in the study were studying at the undergraduate and graduate level at the University of Roehampton, London, UK while the 50 Nigerian Listeners were undergraduates and graduates at a public university in Nigeria. The 100 international listeners were significantly heterogeneous consisting of 25 nationalities. The number of the international listeners and their nationalities is given in Table 5.2 below. The international listeners did not know the five Yoruba speakers personally, and this eliminated any potential error from familiarity with the speakers.

Table 5.2 gives the number of International listeners by Nationality.

Nationality	**Number of Listeners**
American	5
Austrian	2
Brazilian	1
British	37
Chinese	2
French	2
German	5
Ghanaian	4
Greek	2
Indian	7
Iranian	1
Italian	3
Korean	1
Malawian	4
Nepalese	1
Norwegian	6
Palestinian	1
Polish	2
Romanian	1
Russian	2
Saudi Arabian	2
Singaporean	1
South African	1
Spanish	6
Thai	1

It can be observed from the table that the international listeners are significantly heterogeneous comprising of different nationalities. They have come from different first language backgrounds that belong to seven different language families namely, Afro-Asiatic {Semitic: Arabic}, Indo-European {Germanic: Norwegian, German; Romance: Italian, Spanish, Catalan, French, Portuguese, Romanian; Hellenic: Greek; Slavic: Russian, Polish; Indo-Iranian: Persian, Nepali, Marathi, Bengali}, Dravidian: {Tamil}, Sino-Tibetan {Mandarin Chinese}, Tai {Thai}, Independent: {Korean}, Austronesian {Singapore} and Niger-Congo {Chichewa, Twi}. The details of the listener participants L1 and other background information are displayed in the appendix (see Appendix 5).

5.5 Ethics and permissions

The study was carried out in accordance with University of Roehampton ethical policies for research. I submitted a proposal with reference no MCL 13/011 to the university's ethical committee for approval, and it was approved on the 15th of October 2013. Both the pilot study and main study began after this approval. Afterwards, I obtained consent from the selected Radio/TV organisation who recorded and provided the audio podcasts used in this study. I sent emails to the Radio/TV organisation asking for permission to download their podcasts from YouTube and to use for my study. Information about the research including titles, purpose, objectives and significance of the research were attached to the emails. I followed up the emails with telephone calls to facilitate a speedy response. Upon receiving a positive response from each of the TV organisations, I accessed the podcast for my research.

Then, I sent letters to prospective participants asking if they would be willing to participate in the research. In each letter, a brief background of the research, the purpose and significance were given. The letter also indicated the timeframe and procedure for the listening session or dictation task. It was indicated that the listening session would take approximately 45 minutes and 15 minutes to complete a language background questionnaire. Participants were assured of confidentiality[38] and made aware that personal information necessary for the

[38] Cohen, Manion and Morrison (2005: 70) note the following on the treatment of data: 'of the two most important principles which do concern research data, one states that personal data (i.e., data that uniquely identifies the person supplying it) shall be held only for specified and lawful purposes. The second principle states that appropriate security measures shall be taken against unauthorized access to, or alteration, disclosure, or destruction of personal data and against accidental loss or destruction of

study would be encoded. Participants were assigned a reference number as early as possible, and data were stored against this number code rather than against their names. They were also told that the data collected would be used for academic purposes only, specifically, linguistics analysis only. Each participant was told of their right to withdraw from the study with no consequences (British Association for Applied Linguistics). Once the participants indicated that they understood what the study entailed and agreed to participate in the study, they were required to sign the informed consent form (see Appendix for participant consent form). At the end of each listening exercise, a small honorarium of £10 was paid to the listener participants as an incentive for their participation.

personal data'. It is important to point out that this study adhered to both principles at all stages of the research process

SECTION TWO

5.6 Field Work

5.6.1 The Pilot study

I will briefly discuss the pilot study that was carried out in February 2014 prior to the main study. The pilot study was conducted at the University of Roehampton. It was conducted to assess the instruments and the procedure of the study.

Many writers (Bryman, 2008; Mason, 2004; Silverman, 2011; Wilkinson and Birmingham, 2003) have affirmed the benefits of pilot study and my experiences confirmed this usefulness. Through the assistance of the pilot study, I was able to examine the six podcasts selected, the length of the podcasts; the duration of pause placed between listening units or units of utterance and the procedure for listening exercise. It also helped me to assess the likelihood of gaining access to participants and piloting the background questionnaire with my pilot participants. I was able to determine whether any of the questions were difficult for participants. Apart from observing written responses of participants, I asked them directly whether any of the questions were difficult to understand.

Based on feedback from participants, and my own observations, the following changes were made to the questionnaire. Two of the questions: Questions 10 and 17 (Appendix 4) were removed, seven were modified, and all the questions were kept simple, clear, the layout was improved and adjusted, and quite a few new questions were added to elicit greater details from subjects. For example, pilot participants were asked Q19: If you are proficient, or fluent, in any other language(s) in addition to your native language and English, how many hours did you speak it/them? Other language(s) (Please specify). The pilot participants

responded to the first part of the question but omitted the second question. Based on their responses, this question was modified to:

Question 8: Do you have any working language(s) in addition to your native language and English?" Yes ☐ (*If yes move to Q9*) No ☐ (*If No move to Q10*).

Question 9: Please list your working language(s) and indicate how often you speak each one:

(i)_____ (a) Often ☐ (b) Sometimes ☐ (c) Never ☐

(ii) _____ (a) Often ☐ (b) Sometimes ☐ (c) Never ☐

(iii) _____ (a) Often ☐ (b) Sometimes ☐ (c) Never ☐.

After these revisions, I piloted the questionnaire the second time with twelve subjects. I asked them directly whether any of the questions were difficult to understand. Nine of the twelve pilot subjects indicated that Question 14: *have you often talked to or heard English speaking Nigerians over the past 12 months*? and Question 15: *In your usual week activities during the past 12 months, with what frequency did you hear Nigerian English spoken by international students, faculty, or others on or off campus* (7 to 6 times a week, 5 to 4 times a week, 3 to 4 times a week, twice a week or less or Never) were difficult to comprehend. These questions were kept simple and modified to

Question 18: Over the past 12 months, have you communicated with English speaking Nigerians? Yes ☐ No ☐ (*If no, go to Q21)*

Question 19: How often have you communicated with English speaking Nigerians over the past 12 months? (a) Rarely ☐ (b) Sometimes ☐ (c) Often ☐.

As part of this pilot study, the audio podcasts used in the study were tested in terms of the duration of the listening and transcription slots. Each podcast excerpt was divided into meaningful listening units (Munro and Derwing 1995; Kashiwagi et al., 2006) ranging in length from approximately three to eight words to avoid overloading listeners' memory where possible. A short pause was placed in between each listening unit to give listeners time to write down what they heard. For example, Speaker one, two and three's podcast excerpts had fifteen seconds' pause; Speaker four's podcast excerpt had 20 seconds while Speaker five and six's podcast excerpts had eighteen seconds' pause. The podcasts were presented to six Bangladeshis, three Indians, six Nigerians and one American listener selected from among student volunteers. It was found that the excerpt did not pose problems with the listeners except for the duration of pause placed between listening units (units of utterance). All the listeners pointed out that the length of pause placed between units of utterance was too long except for the fifteen seconds' pause. For example, an Indian participant said "*I transcribed all the six speakers comfortably, but the last three speakers* [she was referring to speaker four, five and six] *were too long. I had to wait several times for the next bit of utterance to come up. One becomes tired when the pause is too long especially towards the end of the speech. I was beginning to lose focus because I had to wait for the next utterance to come up…. Speaker 1, 2 and 3 had accurate time pause. I only had to wait for few seconds before the next bit of utterance …"*

Therefore, I decided to conduct another short informal pilot with four participants. This time, the podcast excerpts were divided into a unit of utterances with a fifteen-second pause, ten-second pause, eight and a six-second pause to allow

listeners to write. I found eight, ten, and six seconds to be too short as the participants were unable to write all the words heard. A Nigerian participant said this *"I think the time between each segment of the conversation in the first two of the intelligibility task is too short…*" He was referring to the excerpts with the six seconds pause and the eight seconds pause. He later said *"… You could barely finish transcribing one segment before the next segment starts playing. Though I understood what was being said I had no time to transcribe. I think this would be very problematic for your non-Nigerian Participants…"*. Thus, I decided to play the listening units with a short pause of fifteen seconds in between to allow the listeners to write out exactly what they heard.

5.6.2 The Main Study

The six podcasts were listened to from the computer with the use of earphones. Attempts were made to ensure that all listening sessions took place in a reasonably quiet room free from noise which could influence the procedure. For instance, the listening sessions were carried out in a quiet computer suite located at the University of Roehampton Library. This room is located on the top (4^{th}) floor of the building, far away from café and classrooms and free from extraneous noises. The listeners were expected to write down what they heard from the podcast.

Before the listening task, the listeners were informed of the speakers' name, their profession and the situational context that informed the existence of the podcasts. This was done in order to provide the listeners with a framework within which to focus their attention (Wang, 1987; Atechi, 2007) since it is rare in a real situation

to listen to speech or conversation in a complete vacuum (Tiffen, 1974; Angel, 2013). However, the content of the speakers' text was not disclosed to the listeners. The six excerpts were played once to the listeners. I considered playing the excerpts twice before the listening exercise, but this idea was later dropped because it would have created an unnatural listening situation. In order to keep this as natural as possible, the podcasts (divided units of utterance) were played once.

The listeners heard the utterances in meaningful listening units (see section 5.6.1) and provided their responses on white sheets of paper by writing out the utterances in the dictation exercise. They were required to transcribe as precisely as possible what they heard in each of the six excerpts, and they were told to put a dash or a bracket sign where they did not understand, or simply guess what they thought they heard. At the start, I thought of obtaining oral responses from listeners in individual listening session like the method used by Wang (1987) rather than written responses, but the idea was later dropped given that it was hard to measure the intelligibility of the speech objectively (Bansal, 1969; Tiffen 1974). It was decided that listeners' written responses should be used since they present more permanent and easily verifiable records for further study and analysis (Tiffen 1974; Atechi, 2004; Matsuura, Chiba and Ara 2012; Kashiwagi et al. 2006; Kashiwagi and Snyder, 2010).

After the completion of the listening and dictation exercise, I carefully inputted manually into the computer listeners' transcriptions, and I checked manually again for accuracy. This enabled me to have personal experience with the data.

Various authors have raised concern about using computer-assisted techniques (Cohen et al., 2011; Flick 2009; Gibbs 2007; Mauthner and Doucet, 2003). One of these concerns includes creating a distance between researchers and data. The listeners' transcriptions were used to locate instances of mismatch between the speakers' recordings and the listeners' transcribed text.

SECTION THREE

5.7 The Scoring System

This section focuses on the methods that were used to measure the intelligibility of Nigerian speakers of English to international listeners (IL), and Nigerian listeners (NL).

5.7.1 Scoring Systems Used in Earlier Research

Tiffen (1974:132) and Atechi (2004:114) divided units of utterance as the basis for calculating the intelligibility scores for connected speech. A unit was counted as correct if it contained 'all the key content and structural words giving meaning to a particular unit. Speaker hesitation phenomena such as "you see", "I mean", etc., were ignored. [Conversely], a unit was marked as incorrect if an important element was misinterpreted by the listener'. There were no partial scores. For example, the examples set out in (1) below were counted as correct in Tiffen's study.

(1)

(a) **Speaker Y8**: /the parents of the man hoping to marry looks for the wife for that man /

Listener 158: /the parents of the man hoping to marry **look** for a wife for that man/

(b) **Speaker H4**: /because I had already known the place/

Listener 73: /because I **have** already known the place/

The instances given in example (1a) and (1b) were counted as correct because the minor differences that occur between the speaker's text and the listeners'

version are in changes in tense which did not affect the meaning expressed by the speaker.

The examples mentioned in (2) below were counted as incorrect in Tiffen's study.

(2)

(a) **Speaker Y1**: /from stories I have heard from people/

Listener L1: / from stories I have **had** from people/

(b) **Speaker H 2**: /and if the marriage took place there would be unrest /

Listener L19: /and if the marriage took **less they would be angered** /

(c) **Speaker Y6**: /and I don't think it is convenient for people to stay three in a room/

Listener L93: /I **……** three**……../**

(Tiffen 1974:132)

It can be seen that the first example in (2), was counted as incorrect because one key (content) word "heard" of the unit was misunderstood as "had". While the second example (2b), was marked as incorrect because the second part of the unit was not understood. In the third example (2c) the whole unit was not understood except that the listener (L 93) managed to write down two words from the whole unit. To calculate the scores of a particular speaker with a particular listener, Tiffen subtracted the number of correct units out of the total number of units in the text, and this was converted into percentage form. Therefore, speaker Y4 whose text consisted of 36 units conveyed 27 units correctly to listener L137 and 32 units correctly to L138 this would constitute an intelligibility score of 75% and 89% respectively.

This scoring system appears valid to a great extent (Wang 1987). However, deciding whether a response is correct or incorrect turned out to be much more problematical if it was not as straightforward as the instances mentioned above in example (1) and (2). Besides, Wang (1987) argues that “the wrong interpretation of content or structural word may not [as a matter of fact] imply that the whole utterance is totally unintelligible” (1987:80). Moreover, Tiffen himself pointed out that his scoring method was an advantage to the weaker subjects in the sense that there was no distinction between a unit that failed due to a single keyword (e.g. example 2 (a) above) and a unit that failed due to the listeners’ inability to understand or write down even one correct word from what the speaker said. To control this problem, the question of whether to give partial scores was considered by Tiffen (1974) and Atechi (2004), but they later dropped the idea on the grounds that too many subjective judgments would have to be made by the researcher, and there would be the danger of inconsistency in scoring. In order to control the irregularities that may arise because of subjective judgment, I decided to consider Wang’s (1987) scale of intelligibility which allows intelligibility to be measured in terms of levels of intelligibility.

5.7.1.2 Wang’s Intelligibility Rating Scale

Wang’s (1987) uses in a continuum of intelligibility which allows intelligibility to be measured in terms of levels of intelligibility. He notes that there are various degrees or levels of intelligibility. Clearly, instances in which a listener can guess a word or write part of an utterance are at a different position on the continuum from instances in which the listener is unable to make any guess. The five degrees of intelligibility in his scoring system includes:

Totally intelligible: included utterances which were correctly produced by the subject and correctly heard by the listener. It included utterances which were free from lexical and syntactic errors.

Intelligible: This second degree of intelligibility includes utterances which were wrongly produced by the subject but correctly heard by the listener. The errors could be lexical or syntactic, and the listener either interpreted them through self-correction without realising it or reproduced them exactly with the message understood.

Fairly intelligible: This third degree of intelligibility included utterances which were correctly or incorrectly produced by the subject. The listener was not certain what a particular keyword or phrase in the utterance was. As a result, he might pause to guess what it was from the context. If the guess was correct, it fell into this degree of intelligibility, but if it was a wrong guess, it was categorised in the fourth degree

Partially Intelligible: This included utterances which were correctly or incorrectly produced by the subject. The listener misinterpreted them or misunderstood them, either at a word or phrase level. It also included keywords or phrase which the listener could not fully interpret, but the gist of the utterance was still intelligible.

Totally unintelligible: This included utterances which were correctly or incorrectly produced by the subject. The listener could not interpret the entire utterance. Also, he might be able to hear one or two words in the whole utterance but could not work out the message at all.

Wang (1987:81)

Wang's study was investigated within a paradigm that situates the supremacy of the NS as the "correct" model for non-native speech. For instance, Wang (1987) writes of "utterances which were correctly or incorrectly or wrongly "produced" by the subject." This type of categorization "correctly produced" and "incorrectly produced" shows that the non-native variety or features were still being considered as "deficient" rather than "different". This is somewhat the opposite of what the current study sets out to show. Given the changing roles of the English language, it has been argued that there is a need for framework and methodologies that reflect the changing roles and functions of English in the world today (Jenkins, 2000; Kirkpatrick et al., 2008). So as to take account of these changes, I adapted Wang's intelligibility rating scale to suit the underlying assumption of the use of English by the participants who use English in an international context. So, intelligibility in this present study is not measured in terms of the accuracy of pronouncing words in a particular manner but is determined by the participants' (listeners) themselves.

5.7.2. The Scoring System in the Present Study

Five degrees of intelligibility were identified in my scoring system, and this includes:

Figure: 1. the intelligibility rating scale

Degree	Degree of intelligibility	Sign used in scoring
1	Totally intelligible	TI
2	Intelligible	I
3	Fairly intelligible	FI
4	Partially intelligible	PI
5	Totally unintelligible	TU

Description of the five degrees of intelligibility

Totally intelligible (TI): This first degree of intelligibility consisted of utterances which were correctly identified by the listeners. This is an exact match transcription with the speaker's utterance.

Intelligible (I): This second degree of intelligibility consisted of utterances produced by a speaker that is correctly identified by the listener. It included utterances which have transcription errors which are considered to have been caused by regularizations such as correcting minor grammatical changes or "errors" (e.g. **S:** "who *establish* strategic partnership instead of **L:** "who *establishe*d strategic partnership", minor tense changes for instance "*have* to *has*", omitting a repetition of a word, word omissions and substitutions of words that did not appear in the stimuli, semantic substitutions without any change in the meaning of the utterance, omission or substitution of one determiner for

another which does not affect the meaning expressed by the speaker. For example:

Speaker 1: Marriage has really changed a lot of things
Listener: Marriage have really changed a lot of things

Speaker 3: let us let it be of mutual advantage
Listener 10: let it be of mutual advantage

Speaker 3: and what do what are we saying
Listener 11: but what are we saying

Fairly intelligible (FI): A unit is marked as fairly intelligible, if it contains all the important content words and structural words but has minor differences such as substitution of pronouns with another, auxiliary verbs, prepositions, conjunctions & coordinating connectives and demonstrative pronouns which does not affect the meaning expressed by the speaker. For example:

Speaker 3: If you want our resources
Listener 3: If we want our resources

Speaker 3: We will take loan at reasonable interest rate
Listener: We take loan with reasonable interest rate

Furthermore, instances where a listener was not certain what a certain keyword or phrase in the utterance was, he or she is allowed to make a guess and put this guess in a bracket. If the guess was correct, it fell into fairly intelligible, but if it was a wrong guess or if the listener gave up attempting to interpret it, it was categorised in the fourth degree of intelligibility (partially intelligible).

Partially Intelligible (PI): This fourth degree of intelligibility includes utterances which were partially identified by the listener. The listener misinterpreted them or misunderstood them or omitted them, either at a word or phrase level. It also contains an important element which the listener could not fully interpret, but the general idea or part of the idea of the utterance was still maintained. For example:

Speaker 1: Don't let power, money, fame get into your head
Listener 1: Don't let harmony, money, fear get into your head

Speaker 3: We will take loan at reasonable interest rate
Listener 6: We will take loan interest rate.

Speaker3: China wants certain of our commodities
Listener 13, 14, 17, 20, 28: China wants acting of our commodities

Speaker 1: humility really matters, you have to be humble
Listener 2: family really matters, you have to be humble

Totally unintelligible (TU): This fifth degree of intelligibility included utterances which the listener could not identify at all. The listener could not interpret the entire utterance or transcribe the key content or structural words and as a result, could not work out the speaker's message at all. He may hear one or two words in the whole utterance but cannot work out the message at all. For example:

Speaker 3: early in the 21st century.
Listener 54: /……...21st century**/**

Speaker 1: I channel everything into it
Listener 30: I ……

5.7.3 The Scoring Procedure

For scoring and analysis, I first compared the speakers' transcribed utterances to the listener's transcription in order to identify any mismatch. This was done manually to enable me to become familiar with the data. Then, using the scoring system described in section 5.7.2, I marked each of the listeners' response using the signs TI, I, FI, PI, and TU to place them into one of the five degrees of intelligibility: totally intelligible, intelligible, fairly intelligible, partially intelligible and totally unintelligible.

Below are some of the examples from my score sheet of the speakers' transcribed recordings, listeners' interpretation that was recorded here with their ratings. "S" stands for speaker and "L" stands for the listener.

S (Speaker 3, Utt.8): let us let it be of mutual advantage
L (Listener 10): let it be of mutual advantage
Rated: I (Intelligible)

S (Speaker 3, Utt.5): and what do what are we saying
L (Listener 11): but what are we saying
Rated: I (Intelligible)

S (Speaker 3, Utt.4): early in the eh 21st century.
L (Listener 23): I lived in the 21st century
Rated: PI (Partially Intelligible)

S (Speaker 3, Utt.11): to have reasonable revenue from our resources.
L (Listener 1): to have …… value from our resources.
Rated: PI (Partially Intelligible)

S (Speaker 3, Utt.11): to have reasonable revenue from our resources.
L (Listener 16): to have riskable revenue from our resources/.
Rated: PI (Partially Intelligible)

S (Speaker 3, Utt.12): If you want our resources,

L (Listener 3): If we want our resources

Rated: FI (Fairly Intelligible)

S (Speaker 3, Utt.2): if not the first as an African leader

L: (**Listener 26)** if not the first South African leader/

Rated: PI (Partially Intelligible)

S (Speaker 3, Utt.4): early in the eh 21st century.

L (Listener 40): /……...21st century

Rated: TU (Totally Unintelligible)

S **(Speaker 3, Utt.17):** or we will take loan at reasonable interest rate

L **(Listener 16):** or we take low … interest rate

Rated: PI (Partially Intelligible)

S **(Speaker 3, Utt.2)**: if not the first as an African leader

L (**Listener 18):** of an African leader

Rated: TU (Totally Unintelligible)

S **(Speaker 3, Utt.12)** :/If you want our resources,

L: **(Listener 22)** /……sources.

Rated: TU (Totally Unintelligible)

S (Speaker 3, Utt.2): if not the first as an African leader

L **(Listener 23):** if not the first of an African leader

Rated: FI (Fairly Intelligible)

S **(Speaker 3, Utt.19):** Now this is what we want

L **(Listener 41):** Now this is what you want

Rated: FI (Fairly Intelligible)

S **(Speaker 4, Utt.10):** and when I sit down at times

L **(Listener 60):** when I sit down outside

Rated: PI (Partially Intelligible)

Even with the marking system adopted, there were instances when subjective judgments had to be made as to whether a unit was partially intelligible or fairly-intelligible. As was pointed out by Wang (1987), whatever method for measuring intelligibility is employed, some degree of subjectivity is unavoidable. However, to ensure consistency, the reliability of my judgments (the intelligibility rating scale) was verified and validated by one South African and one British English speaker who have extensive experience in teaching English at the University of Roehampton in London. Both were given 14 examples from each level of intelligibility (excluding totally intelligible) of the listeners' own responses with a copy of the speaker's transcribed text and a copy of the description for the five degrees of intelligibility. To validate the criteria, they placed each of the examples into one of the degrees of intelligibility according to the explanation provided. This was one way of ensuring that the analysis and identification of the miscommunications were consistent. Based on their feedback, there was a very little discrepancy regarding placing some of the listeners' responses into a particular rating. I adjusted the criteria and revised my analysis. However, to recheck the consistency of the scoring rating, I conducted another validation session with two native English instructors. Overall, there was broad consensus from all the reviewers with the researcher's ratings. All these measures were taken in order to be as thorough as possible in placing listeners' transcripts into one of the degrees of intelligibility; however, despite the measures taken to ensure validity, there may be some discrepancies that remain unavoidable.

After validating the intelligibility rating scale, utterances rated partially intelligible and totally unintelligible were separated from TI, I and FI so as to identify instances of breakdown in communication. 64 tokens of intelligibility breakdown were identified. These 64 tokens were where intelligibility failed twenty or more listeners. Where only one to nineteen listener(s) failed to understand an utterance or a word, the failure has been discounted for the purposes of this analysis. The cut-off point used in this present study is in the same range with those that have been employed in previous studies. Tiffen (1974) and Atechi (2004) used two or more out of ten listeners as the cut-off point for the number of transcription errors that are significant. Therefore, in my study, I considered twenty to be an approximate cut-off point for the number of transcription errors that are significant.

Once the instances of intelligibility breakdown were identified in the transcripts, I listened to the speakers' recordings six times using Praat (a computer software for the scientific analysis of speech in phonetics) to determine if the mismatch between the speakers' transcribed utterance and the listeners' transcription were caused by the pronunciation of the speakers or by other linguistics factors or social knowledge. It should be noted that not all instances of intelligibility breakdown are caused by problems at the phonological level. Out of the 64 tokens of intelligibility breakdown, 56 were caused by phonology while the remaining were due to other reasons such as lexical usages (e.g. *constituency*, *exterior, interior* and *directed)* and speech error. This is in line with Deterding (2013) who found that over 86% of tokens of misunderstanding in his study involved pronunciation. Jenkins (1995; 2000) in her study also found that majority (27 out of 40) instances of intelligibility breakdown were caused by "errors" on the

phonetic and phonological level (2000:85). The remainder was due to lexical factors. Although lexis may be critical to understand intelligibility fully, this factor is outside the scope of this present study.

5.8 Conventions and Terms Used in Presenting the Data

Before presenting the analysis in the next chapter, I will explain some of the terms and conventions used in the analyses chapter.

5.8.1 Tokens

A Token represents a word that caused intelligibility breakdown for listeners. For example, consider Extract 5.1

> *Extract 5.1* (Tokens 9 and 40)
> *Context*: …a lot of people don't get to know that; I am an **introvert** [ˈɪntrəvat] **person** [ˈpɛːsᵊn]… (Speaker Four, unit 7-8)

In this extract, the mid-central vowel /ɜ: / in the last syllable of the word "introvert" and the initial syllable of "person" were pronounced as [a] and [ɛː] respectively. This word caused problems with intelligibility for listeners. The two words are separate tokens but represent one type or feature and, in this case, the mid-central vowel /ɜ: /. A single token may sometimes consist of more than one word, particularly when a fixed phrase is involved. Let me illustrate this with an extract from the podcast recordings. In extract 5.2, speaker three has been talking about establishing a business partnership with China. He says:

> *Extract 5.2*
> *Context*: …we want to be able/to have **reasonable** [ˈrizᵊnəbʊ] revenue from our resources/if you want our resources/we need that our laws and rules must be respected/we want infrastructure/ and if you can give us that/ yes, and we will pay for it either directly/or we will take loan at **reasonable** [ˈrizᵊnəbʊ] **interest rate** [ɪnˈtrɛstˈreɪt]/ (Speaker Four, unit 9-11)

Here *interest rate* consists of two words, but it is just one entity, so it is treated as a single token of intelligibility breakdown. There is one other issue with regard to Extract 5.2. Listeners misunderstand **reasonable** both times it occurs in speaker three's speech. I classified the second occurrence "reasonable" as a separate token of intelligibility breakdown.

5.8.2 Classification/Type

After all the tokens of intelligibility breakdown caused by pronunciation were collated, I classified each token into a particular segmental feature or type. Inevitably, it is not always possible to identify a single cause, as quite often there are multiple causes. Consider, for example, Extract 5.3.

> *Extract 5.3.*
>
> *Context*: /… hmm I believe, I was the first [ˈfɜːst] or one of the first [ˈfɜːst] (unit 1), / if not the first [ˈfɜːst] as an African leader (unit,2)/ who hmm established strategic partnership with China/ **early** [ˈaleɪ] in the twenty-first [twentiˈfɜːst] century. (Unit, 4) /and what do what are we saying? /we are saying yes…/What does China want from us? (Unit 23) /China wants **certain** [ˈsatɪn] of our commodities (unit 24).

In this extract, Speaker three is talking about the period Nigeria established a business partnership with China. He used the vowel variant [a] rather than the mid-central vowel [ɜː] in the first syllable of "early" while the diphthong [eɪ] was used in the second syllable rather than a close front vowel /i/. The pronunciation of the word caused intelligibility problems for listeners who came up with different realisations such as "I lived", "I lay", "I reigned", "I let" etc. The immediate cause of this can be assumed to be the different realisation of mid-central vowel, as Speaker three uses [a] for [ɜː], something he often does (as we will see in Section

6.1.1). In addition, he similarly realises the vowel [i] on the second syllable of "early" as [eɪ].

Similar to the previous case of "Early", the vowel quality in the first syllable of "certain" /ˈsɜ:tᵊn/ is pronounced with front vowel [a]. In addition to this, the vowel in the final syllable is pronounced with a close short lax vowel [ɪ]. The word "certain" (pronounced [ˈsatɪn]) caused intelligibility breakdown for 86 listeners who wrote "acting", "act in", "something". The main cause of this can be assumed to be the different realisation of mid-central vowel [ɜ:] and [ə] as [a] and [ɪ] respectively.

Another instance from a different Speaker is shown in Extract 5.4

> *Extract 5.4.*
> *Context*: I find the very notion of political correctness (unit 1)/very condescending (unit 2)/ er it's an assumption of a kind of er (unit 3)/standing on **high moral** grounds (unit 4)/ and er presuming that others cannot quite attain (unit 5)/ that **moral** height hmm or even cultural **universalism [**juːnɪˈva sᵊlɪzᵊm]…/(Speaker Two, unit 1-6).

In this case, 64 listeners were unable to understand *universalism*, and they subsequently guessed that it could be "verbalism", "realism", "socialism", "idealism" and "rationalism" (though that does not make much sense in this context). This might be considered a problem with pronunciation: *universalism* is pronounced as **[**juːnɪˈva sᵊlɪzᵊm], with [a] rather than [ɜ:] in the third syllable. But that does not tell the whole story. A contributory factor is that the word *universalism* somehow seemed 'unfamiliar' to the listeners because it is a low-frequency word. For example, in the component of the British National Corpus

(BNC), a 100 million corpus, the word “universalism” appeared twice in the spoken domain and 35 times in all other domains. The Corpus also reveals that “universalism” was used more in academic settings and used less often in spoken social interactions. So, I conclude that this token involves a combination of a segmental feature in this case [ɜ:] and lack of familiarity with the word.

One should note that both extracts (5.3 and 5.4) illustrate that many tokens of intelligibility involve a range of different segmental features and other factors, and it is not always possible to identify a single cause. Despite these difficulties, I have attempted to classify the tokens of intelligibility breakdown under a key segmental feature and explained the contributory factors, but in cases where there appear to be multiple key segmental features, I cross-classify the token. So, looking at most listeners’ transcriptions of the word “certain” as “acting” and “act in”, I classified this token as involving two segmental types.

5.8.3 Description for Codes used in tabulating the data in this study

As I tabulated the data (see Chapter 6 throughout for deployment), I used the following codes. I include an example tabulation without discussion for illustration.

NOL= This code refers to the number of listeners that experienced intelligibility breakdown.

ORP= (Orthographic Representation of Phoneme). This signals instances in the data where listeners seemed to have orthographically represented the sound they heard. For example: in Token 42, speaker four pronounced the vowel in

“introvert” as the back vowel [a] rather than the mid-central vowel quality [ɜ:] which is expected in the reference accent (Received Pronunciation). Four listeners transcribed the word as “introvat” (phonetically transcribed as [ˈɪntrəvat]). This transcription shows that the listeners recognised the sound [a] used by the speaker in the final syllable and they orthographically represented this.

ORA= (Orthographic Representation Attempted). This code refers to instances in the data where listeners appeared to have orthographically represented part of a word apart from the syllable in which the pronunciation of a segmental feature varied from the referent accent (RP). For example: “introvert” pronounced as [ˈɪntrəvat] by speaker four was heard as “intro????” by some listeners. This listeners’ response shows that part of the word or text (in this case, the first and the second syllable in **intro**vert) has been orthographically represented but the syllable in which the pronunciation of the speaker has varied from the referent accent (RP) (in this case the final syllable in intro**vert**) is not recognised. Another example that belongs to the code ORA are cases where listeners incorrectly orthographically represented a phoneme used by a speaker. For example: introvert pronounced as [ˈɪntrəvat] was transcribed as “intellect” (phonetically transcribed as [ˈɪntəlekt]). This transcription demonstrates that the listeners recognised the [e] vowel in the final syllable instead of [a] used by the speaker.

SA = (Semantically Appropriate). This refers to instances where listeners seemed to have chosen words that make sense in their interpretation of utterances. For example: three listeners transcribed “I am an introvert person” as “I need the *right* person”. This listeners’ text or transcription shows that they have chosen words

that are meaningful within the utterance but is not contextually appropriate as it does not fit the context in which the utterance was made.

CA= (Contextually Appropriate). This signals instances where listeners seemed to have relied on the context or circumstances in which the utterances were produced or cases where they may have resorted to their own previous background knowledge in their interpretation of utterances. For example: seven listeners transcribed “keep” (pronounced with a short vowel length by speaker one) as “get” in the phrase “…whoever you are, keep your head straight”.

SC= (Syntactically Correct). This code refers to cases where listeners seemed to have chosen words that are syntactically correct or appropriate. In other words, they have used their syntactic knowledge to decode the meaning of a word.

NR= (No response). This code refers to instances where listeners did not write anything for the word said by the speaker. For example, I am an introvert (pronounced as [ˈɪntrəvat]) person transcribed as “I am an ?????? person”.

5.9 Concluding Remarks

The chapter has discussed the research design and the methodology background for this study. It started with a brief description of the designs and methods used in previous research and then briefly discussed the materials used to assess intelligibility in the present study, with a justification of these materials. Based on discussions in the chapter, I conclude that the selected type of

instrument and measurement procedure depends on the definition of speech intelligibility put forward by each researcher, as well as on the specific goals of each study. In any case, from the overview of the literature presented in this chapter, another conclusion worth drawing attention to is that subjective measurements using rating scales are of little use when the research goals centre on obtaining information on those segmental or suprasegmental features that may be responsible for intelligibility loss while the use of transcription seems to be more appropriate for this purpose.

The next part of the chapter described the recruitment process, participants and ethical considerations of the empirical components of my research. Here, I also drew attention to how I undertook the field work and ended with a brief description of the scoring system and methods used to analyse and present the data. The following chapter presents the analyses and discussion of the study

Chapter Six:
Findings and Discussion 1

Segmental Features Affecting Intelligibility of Nigerian Speakers of English to International Listeners

6.0 Introduction:

In the previous chapter, I discussed the methodology of my study. I showed how I reviewed relevant existing research to shape the direction of the empirical component of this study. In this present chapter, I analyse and discuss the results and findings that emerged from the empirical aspects of my study. My aim is to address the research question posited in section 1.5 of Chapter 1. The question, to recap, is what segmental features of pronunciation used by Nigerian speakers of English affect intelligibility?

Some researchers claim that some aspects of pronunciation are far more consequential to the maintenance of mutual intelligibility in English interactions than others (Jenkins 2000; 2002; 2007; Walker 2010; Deterding 2012). Whilst there is evidence that segmental features of pronunciation cause intelligibility breakdown (Zhang, 2013), there is no widespread agreement on the exact aspects of pronunciation that are most consequential (O'Neal, 2015). Many ELF scholars claim that all consonants (except dental fricatives) and vowel quantity are critical for maintaining intelligibility while vowel quality is not very important to the maintenance of mutual intelligibility (e.g. Jenkins, 2002; 2010). Other scholars, using observations of recorded ELF interactions and ethnographic methods, claim that the mid-central vowel /ɜ: / is the only vowel quality that is critical to the maintenance of mutual intelligibility (Jenkins 2000; 2002; Walker

2010). Other ELF scholars add the vowel /æ/, /ʌ/ and the diphthong /ei/ to the vowel qualities that are critical to the maintenance of mutual intelligibility (Cole 2002; Deterding and Kirkpatrick 2006; Deterding 2012; 2013; Zhang, 2013; O'Neal 2015). Therefore, although studies (such as Deterding, 2013; Zhang, 2013; O'Neal 2015) agree that some segmental features of pronunciation cause intelligibility breakdown, there is no agreement about the specific segmental features that cause problems. Against this background, my discussion of findings here is an important step towards addressing this relative paucity of knowledge. Specifically, my discussion identifies the main segmental features that caused intelligibility breakdown in the speech of Nigerian speakers when they communicate in international settings.

I have found many segmental features that caused intelligibility breakdown. In organising the present chapter, I have tabulated and grouped these into necessary phonological categories in order to help summarise the findings and highlight the patterns in the data. Thereafter, I discussed each of the categories. The analysis in this chapter also includes a number of transcribed excerpts from the speakers' speeches to illustrate how the grouped segmental features obstruct intelligibility as well as how the listeners react to the intelligibility problem. Although my aim in the study is to identify segmental features, there are also other factors (e.g. context, word frequency, prosodic features such as stress) that I draw attention to in my discussion because they sometimes contributed to the intelligibility breakdown.

I have divided the chapter into two sections. In the first section, I discuss the vowels that caused intelligibility breakdown when international listeners listened to six Nigerian speakers of English. In the second section, I discuss the consonants that caused intelligibility failure.

SECTION ONE

6.1. Data Analysis: Vowels Affecting Intelligibility of Nigerian Speakers of English to International Listeners (ILs)

In this section, I discuss vowels that led to intelligibility breakdown among 100 international listeners (42 NS and 58 NNS) who listened to Nigerian Speakers of English. I will consider the quality of vowels, and the length of vowels. The table provided below presents an overview of each of the vowels that I have identified, alongside the number of instances of intelligibility breakdown associated with each.

Table 6.1: Vowels causing intelligibility breakdown

Phonological Factor	**Tokens**	**Instances of intelligibility breakdown to ILs**
Mid-central vowel [ɜ:]	19 (universalism)	64
	26 (early)	78
	36 (certain)	86
	42 (introvert)	50
	5 (work)	24
	46 (work)	29
	62 (burden)	42
	43 (person)	22
Mid-central vowel [ə]	17(moral)	24
	18 (moral)	32
	54 (total)	29
	56 (critical)	38
	29 (revenue)	43
	33 (interest rate)	32
	36 (certain)	86
	47 (deepen)	36
	37 (our commodities)	33
Open-mid central vowel [ʌ]	2 (other)	32
	3 (nothing)	65
	7 (must)	29
	8 (Sundays)	30
	11 (money)	26
	23 (among)	25
	30 (must be)	48
	48 (budgeting)	43

	50 (agriculture)	31
	64 (buck)	50
short lax (lowered close-centralized front) vowel [ɪ]	6 (marriage)	41
	24 (establish)	30
	53 (enabling)	34
	60 (enlargement)	79
	31 (respected)	31
	57 (skilled)	46
	58 (skilled)	32
	59 (living)	60
Vowel length	1 (any)	36
	4 (lead)	41
	13 (keep)	22
	25 (strategic)	28
	28 (reasonable)	37
	32 (reasonable)	35
	47 (deepen)	36
	57 (skilled)	46
	58 (skilled)	38
	59 (living)	60
	19 (universalism)	64
	26 (early)	78
	36 (certain)	86
	42 (introvert)	50
	12 (fame)	43
	14 (straight)	32
	40 (way)	26
	41 (go)	37

Below, I shall discuss in detail, the segmental features responsible for intelligibility breakdown.

6.1.1. Mid central vowel /ɜː /

The table given below presents the list of all the instances of intelligibility breakdown that occurred because of the alternatives to the referent sound [ɜː].

Table: 6.2. Intelligibility breakdown involving [ɜː]

Token no	Speaker	Word	Pronunciation	Instances of Breakdown
5	One	work	[ˈwɔː k]	24
46	Four	work	[ˈwɔː k]	29
62	Six	burden	[ˈbɔːdᵊn]	42
19	Two	universalism	[juːnɪˈva sᵊlɪzᵊm]	64
26	Three	early	[ˈaleɪ]	78
36	Three	certain	[ˈsatɪn]	86
42	Four	introvert	[ˈɪntrəvat]	50
43	Four	person	[ˈpɛːsᵊn]	22

In the first three tokens, 5, 46, 62, the mid-central vowel [ɜː] was pronounced with a back vowel [ɔː]; however, in Tokens 19, 26, 36 and 42, it was pronounced as the front vowel [a] (Cardinal four), and finally, in Token 43, it was pronounced with [ɛː] vowel. I will start by discussing Tokens, 5, 46 and, 62 because I consider them to be straightforward. This is because alternatives to the mid-central vowel [ɜː] were the sole cause of the intelligibility breakdown. Thereafter, I will deal with complicated tokens (19, 26, 36, 42 and 43). By complicated tokens, I mean cases where multiple factors seem to have contributed to the intelligibility breakdown.

In Token 5, Speaker one pronounced the vowel quality in “work” as open-mid back vowel [ɔː] in the phrase “so I work and rest together”. The pronunciation of this word caused intelligibility breakdown for 24 listeners[39]. A further breakdown is given in the following table.

[39] This number represents the following nationalities (6 Norwegians, 1 Brazilian, 12 British, 2 Greeks, 1 German, 1 Ghanian, 1 French).

	Listener response	NOL[40]	ORP[41]	ORA[42]	SA[43]	CA[44]	SC[45]	NR[46]
1	So, I *walk* and rest together	24 listeners	✓		✓		✓	

The main issue with the pronunciation of "work" here is the use of open-mid vowel [ɔ:]. Precisely the vowel that changes the meaning in the minimal pair[47] "work" and "walk*"*. It should be noted that apart from the word *work*, there were three words in speaker one's speech in which the mid-central vowel quality [ɜ:] could be expected in the reference accent (Received Pronunciation). These words are "versatile", "person", "working" (two occurrences). The extract below shows the wider context in which these words appeared.

> *Extract 6.1.*
> *Context:* … and I'm supposed to be **versatile** [ˈvɜːsətaɪl] as an actress. /So, playing Jennifer and playing other roles / has nothing to do with my **person** [ˈpɜːsən]. Well, I love my job so much / if I'm not resting, I'm **working** [ˈwɜːkɪŋ] / even while **working** [ˈwɜːkɪŋ], I rest. /I'm a producer; I'm a writer. /All my movies, I write them, and I produce them / and I play the lead characters. / So, any spare time I have, I rest. / I **work** [ˈwɔːk] and rest together…(Speaker one, unit 3-13).

While the speaker pronounced the first syllable of "versatile" and "person" with the mid-central vowel [ɜ:] in the initial syllable, it caused no intelligibility problems for listeners'. However, in the case of "work", there were three instances where

[40] This represents Number of Listeners
[41] This represents Orthographical Representation of Phoneme used
[42] This signifies Orthographical Representation Attempted
[43] This means Semantically Appropriate
[44] Meaning Contextually Appropriate
[45] Syntactically Correct
[46] No Response
[47] In phonology minimal pairs are pairs of words or phrases in a particular, which differ in only one phonological element, such as a phone, phoneme, and have distinct meanings.

the verb form of “work” was used in speaker one’s speech (see extract 6.1). On two occasions, the speaker pronounced the first syllable of “working” with the mid-central vowel [ɜː], and this was completely intelligible to all listeners. However, it was when she pronounced [ɔː] that intelligibility failure occurred[48]. It is interesting to note that speaker one had so much variation in the way she pronounced the mid-central vowel [ɜː]. It seems she has different lexical sets[49]. So “work” belongs in the lexical set with “walk” and “talk”, whereas “versatile” and “person” belong in the “nurse” lexical set. Although “work” was in context and listeners had already heard the word twice in speaker one’s excerpt, it caused intelligibility problems for 24 listeners[50].

On the other hand, 76 listeners[51] had no problem understanding the word “work” as they transcribed it correctly. This could be because they relied on the contextual information or circumstances in which the utterances were produced. From the background context, “work” would be an obvious word to have in the utterance rather than “walk” because speaker one in her previous utterances is talking about her job. For these listeners, context seems to override pronunciation cues (Matsuura, Chiba and Ara, 2012).

[48] Jenkins (2000) also drew a similar conclusion.

[49] A lexical set is a set of words which are pronounced with the same vowel in the reference accents (in this case RP). The name of the set is a keyword selected from the set. E.g. KIT is the lexical set associated with the vowel [ɪ] of RP and GA. DRESS the set containing [ɛ], TRAP the set containing æ, etc (Wells, 1982).

[50] This number represents the following nationalities (12 British, 6 Norwegians, 1 French, 1 Ghanaian, 2 Greeks, 1 Brazilian and 1 German).

[51] This number represents the following nationalities: (25 British, 2 Austrian, 5 American, 3 Italians, 1 Palestinian, 2 Chinese, 1 French, 4 Germans, 1 Korean, 1 Nepalese, 2 Polish, 4 Malawians, 2 Russians, 2 Saudi Arabian, 1 Singaporean, 3 Ghanaian, 7 Indian, 1 Iranian, 1 south African, 6 Spanish, 1 Romanian, 1 Thai)

The fact that the words “working” (two occurrences), “person” and, “versatile”, which occurred earlier in speaker one’s speech were pronounced with a mid-central vowel [ɜ:], while “work”, which occurred later in her speech was realised by a back vowel [ɔ:] may suggest that this speaker struggled to meet the target pronunciation. It could also indicate that she attempted to suppress the non-target pronunciation (Jenkins, 1995; 1998; 2002; 2009; Omoniyi, 2008). In other words, it appears that she tried to monitor her output rigorously and considerably to reduce the risk of automatic phonological transfer slipping through. As she went further in her speech; it appears she relaxed her control on pronunciation. Thus her pronunciation may have become typical of her L1 phonological system making pronunciation transfer of [ɔ:] for [ɜ:] in “work”. This corresponds to Josiah and Babatunde’s (2011) observation that the central vowels are absent in most Nigerian languages phonemic systems (including Yoruba language the L1 of the speakers used in this investigation), and that these tend to characterise the Nigerian accent of English (Brosnahan 1958; Banjo 1971; Adetugbo 1977, 2009; Jibril 1979, 1982; Bamgbose 1982; Eka 1985; Awonusi 2004; Jowitt 1991, 2000; Udofot 1997, 2004, 2007). In Nigerian English, the central vowels are often realised by an open-mid back vowel [ɔ], open front vowel [a], and open-mid front vowel [ɛ] (Simo Bobda 2007).

In Token 46, Speaker four (a Nigerian actress) is talking about how she gets inspiration writing her movies. She pronounced the vowel quality in “work” as back vowel [ɔ:]. So she said [wɔ:k] in the following extract:

Extract 6.2
Context: A lot of things have really changed/ erm acting and production wise, /yes, we have really, really improved…and when I sit down at times/some things just cross my mind /and I start to write /or I'm in the midst of some people/and I see things. /By the time, I get back into my privacy, I like, start to **work** on it (Speaker four)

This pronunciation of [ɔ:] caused intelligibility problems for 29 listeners whose responses are given in the following table.

	Listener response	NOL	ORP	ORA	SA	CA	SC	NR
1	I like start to *walk* on it	26 listeners	✓		✓		✓	
2	I like start to??????? on it	3 listeners						✓

From the table, 3 listeners[52] found the word "work" unintelligible while 26 listeners[53] have orthographically represented the sound [ɔ:] they heard. It is quite likely that the three listeners who found the word unintelligible cannot match this pronunciation of [ɔ:] with the context of the word. While those who misidentified or misunderstood the word have put down exactly what they have heard from the speaker. Also worth considering is the fact that before the listening exercise took place, listeners were told who the speaker was. This should have given the listeners a frame to work with. The context in which the word occurred also should have given a lot of contextual information. But in spite of the context, the majority of listeners have made an orthographical representation of the sound used by the speaker. This demonstrates they have relied only on the pronunciation and

[52] This number represents the following nationalities: (1 South Korean, 1 Malawian, 1 British)
[53] (4 Norwegians, 2 Americans, 3 Indians, 5 British, 1 Romanian, 2 Greeks, 1 Brazilian, 2 Malawians, 1 Russian, 1 Spanish, 1 French, 2 Chinese and 1 Nepalese)

ignored the context, leading me to conclude that the vowel quality [ɔ:] used was the cause of unintelligibility.

The remaining 71 listeners[54] understood and transcribed "work" despite its pronunciation as [ɔ:]. This could be because the word appeared earlier in speaker one's speech (see extract 6.1) suggesting that listeners may have adapted to the Nigerian English variety. Some of them may have noticed that Nigerian users may use a back vowel [ɔ:]. Another possibility could be that these 71 listeners used the available semantic context to correctly identify the word. From the background context, "work" would be an obvious word to have in the utterance rather than "walk". This corresponds to Schmid & Yeni-Komshian (1999) and Kennedy & Trofimovich's (2008) observation that listeners are faster and more accurate at detecting "mispronunciations" of a word when it is predictable from the preceding semantic context than when it is not.

In Token 62, Speaker six pronounced "burden" [ˈbɜːdᵊn] as [ˈbɔːdᵊn]. Here, Speaker six is talking about how he dislikes being referred to by titles (associated with social status) that are associated with his high achievements and educational qualifications. He says "…yes, it becomes very much a burden" (Speaker six, unit 6). He pronounced the initial syllable of "burden" with the vowel variant [ɔ:]. The pronunciation of this word caused intelligibility breakdown for 42 listeners. A breakdown of the responses made by the 42 listeners are given in the examples below:

[54] (31 British, 2 Austrian, 3 American, 3 Italians, 1 Palestinian, 1 French, 5 Germans, 2 Polish, 1 Malawian, 1 Russians, 2 Saudi Arabian, 1 Singaporean, 4 Ghanaians, 4 Indians, 1 Iranian, 1 south African, 5 Spanish, 1 Thai, 2 Norwegians).

	Listener response	NOL	ORP	ORA	SA	CA	SC	NR
1	yes, it becomes very much a *board*	6 listeners	✓					
2	yes, it becomes very much *boring*	2 listeners	✓		✓			
3	yes, it becomes very much a??????	18 listeners						✓
4	yes, it becomes very much a *boarding*	2 listeners	✓					
5	yes, it becomes very much a *broad*	2 listeners	✓		✓			
6	yes, it becomes very much broaden	12 listeners	✓		✓			

It is interesting that the highest numbers of listeners could not decipher the word "burden" while those who misidentify the word have recognised the actual quality of vowel [ɔː] used by the speaker. This led to the conclusion that the use of back vowel [ɔː] in "burden" is the cause of unintelligibility. It should be noted that apart from the word "burden", there was one other word in speaker six's speech in which the mid-central vowel [ɜː] might be expected in the reference accent. This word is "first" in the phrase "The first thing is that I hate titles, I really do…" (Speaker six, unit 1). The word was pronounced with mid-central vowel [ɜː] and completely intelligible to all listeners.

So far in this section, I have discussed clear cases where alternatives to the mid-central vowel [ɜː] vowel were the sole cause of intelligibility breakdown. Now, I will move to consider complicated tokens (Tokens 19, 26, 36, 42 and 43) where there appears to have been multiple factors that caused the breakdown. In Token 19, Speaker two pronounced the vowel in the third syllable of "universalism" with an open front vowel [a]. He enunciated [juːnɪˈva sᵊlɪzᵊm] in the following extract:

Extract 6.3.
Context: I find the very notion of political correctness /very condescending / er it's an assumption of a kind of er /standing on high moral grounds / and er presuming that others cannot quite attain / that moral height hmm or even cultural **universalism** [juːnɪˈva sᵊlɪzᵊm]…/(Speaker two, unit 1-6).

In this extract, the pronunciation of "universalism" led to 64 instances of intelligibility breakdown with listeners. The examples below give the detail of the intelligibility breakdown:

	Listeners' responses	NOL	ORP	ORA	SA	CA	SC	NR
1	that moral height hmm or even cultural *??????*	44 listeners[55]						✓
2	that moral height hmm or even cultural *realism*	2 listeners[56]	✓		✓		✓	
3	that moral height hmm or even cultural *socialism*	3 listeners[57]	✓		✓		✓	
4	that moral height or even cultural *salism*	1 listener[58]	✓		✓			
5	that moral height hmm or even cultural *idealism*	13 listeners[59]	✓				✓	
6	that moral height hmm or even cultural *rationalism*	1 listener[60]	✓		✓		✓	

As shown above, most of the listeners (44) did not understand the word "universalism" as they were unable to write anything down for it while some others (19 listeners) came up with different suggestions such as "salism", "realism",

[55] This number signifies the following nationalities (17 British, 2 Americans, 3 Spanish, 1 Thai, 1 Austrian, 2 Russians, 1 Romanian, 1 Saudi Arabian, 3 Indians, 2 Italians, 1 polish, 3 Norwegians, 1 Nepalese, 1 south Korean, 1 Iranian, 2 German, 1 Chinese, 1 Singaporean)
[56] This are 2 British listeners
[57] This number represents the following nationalities (1 British, 1 American, 1 Norwegian)
[58] 1 Greek
[59] The 13 listeners consist of 6 British, 2 Norwegians, 1 Greek, 2 Austrians, 1 Ghanaian, 1 Spanish
[60] This listener is a Spanish

“socialism”, “idealism” and “rationalism”, which did not fit the context of the utterance. Their responses reveal that they recognised the last two syllables of “universalism” (“-lism”), which may suggest that the last two syllables posed no challenges whatsoever. A critical look at the responses reveals that majority of the listeners who misunderstood “universalism” orthographically represented the sound [a] used by the speaker. This may imply that the cause of unintelligibility was the use of [a]. In cases such as this, it is difficult to separate out vowel quality from its length. As a result, the length of the vowel may have interacted with the vowel quality to cause the breakdown.

Apart from the vowel quality and length used in the third syllable of “universalism”, the contextual background in which the speaker used the word appears to be a contributory factor to the intelligibility breakdown. It can be observed from the table above that many listeners are trying to work out what they heard within the frame of “cultural”. So, responses such as “idealism”, “socialism”, and “realism” demonstrate that many listeners have chosen words that are semantically appropriate but not contextually appropriate. These words do not fit the broader context in which “universalism” occurred. The speaker in a UNESCO meeting was addressing a high-level panel that comprises prominent political, intellectual and religious personalities from all regions. The meeting was in the form of a Question and Answer session. In response to a question raised by one of the panel members, this speaker was demonstrating the benefits of cultural diversity by acknowledging the importance of the continuous transfers and exchanges between cultures and the ties forged between them. Since the words used by the speaker were directed at UNESCO members, it was quite likely that the context

appears to be unfamiliar to my international participants who listened to the excerpts because they may lack the contextual background.

It could also be that “universalism” somehow seemed unfamiliar to them because it is a low-frequency word (Deterding and Mohamad 2016; Haley & Jacks 2014; Deterding, 2013; Becker 2013). For example, in the component of the British National Corpus (BNC), a 100 million corpus, the word “universalism” appeared twice in the spoken domain and 35 times in all other domains. The Corpus also reveals that “universalism” was used more in academic settings and used less often in spoken social interactions. Similarly, in the Vienna- Oxford International Corpus of English[61] (VOICE hereafter), the word “universalism” did not occur in the 1-million-word corpus, but “universal” appeared four times. Based on the frequency of this word “universalism”, it appears that the listeners were not anticipating this word and did not follow the shift in vowel quality. This may contribute to the word being unintelligible to 64 listeners. In sum, the listeners’ inability to understand “universalism” could be due to many factors such as pronunciation (the use of [a] in the third syllable), background context and lexis as well as, word frequency (Deterding 2013).

In Token 26, Speaker three pronounced the word “early” [ˈɜ: li] as [ˈaleɪ] in the phrase “early in the twenty-first century”. Here, Speaker three was talking about the period Nigeria established a business partnership with China. He pronounced

[61] Vienna- Oxford International Corpus of English (VOICE) is a computer-readable corpus of English as a lingua franca, one of the main usages of the language. It comprises 1 million words of transcribed spoken ELF from professional, educational and leisure domains and various speech event types. The speakers in the corpus are viewed primarily not as language learners but as speakers in their own right. VOICE was thus conceived to serve as the first general corpus of English as a lingua francs (ELF) (Seidlhofer, 2010).

the first syllable of “early” with a vowel variant [a], a pattern that has been reported in Deterding (2011). In addition to this pronunciation, this speaker used a different vowel length on the first syllable (this will be discussed in Section 6.1.1.5) and pronounced the vowel quality on the second syllable with a diphthong [eɪ]. This pronunciation of “early” as [ˈaleɪ] caused intelligibility problems for 78 listeners as exemplified in the following table:

	Listeners’ responses	NOL	ORP	ORA	SA	CA	SC	NR
1	*I liv(ed)* in the 21st century	25 listeners[62]	✓		✓		✓	
2	*I lay* in the 21st century	12 listeners[63]	✓				✓	
3	*I really* mean that 21st century	1 listener[64]	✓					
4	I reigned in the 21st century	2 listeners[65]	✓		✓		✓	
5	I let him be in the 21st century	4 listeners[66]	✓					
6	I led in the twenty-first century	2 listeners	✓				✓	
7	????? in the 21st century	18 listeners[67]						✓
8	I ???? in the 21st century	14 listeners[68]						✓

As shown in the listeners’ transcriptions above, all those who misunderstood the word “early” recognised the first syllable as “I” [aɪ] in “early”. The word “I” has [a] as the first part of the initial diphthong which suggests that the listeners have

[62] This number represents the following nationalities: (4 Americans, 4 British, 3 Norwegians, 3 Indians, 2 Greeks, 1 Austrians, 1 French, 1 Chinese, 1 Nepalese, 1 Palestinian, 1 Saudi Arabian, 1 German, 1 Thai, 1 Romanian)

[63] (8 British, 1 Spanish, 1 south Korean, and 2 Norwegians)

[64] 1 Russian

[65] 1 Norwegian and 1 British

[66] (1 Ghanaian, 1 polish, 2 British)

[67] (3 British, 2 Germans, 3 Italians, 1 Singaporean, 2 Spanish, 1 polish, 1 Iranian, 1 Chinese, 1 South African, 1 Saudi Arabian, 1 Norwegian, and 1 Ghanaian)

[68] (11 British, 1 Indian, 1 Spanish and 1 Brazilian)

heard the pronunciation of open front vowel [a] in the initial syllable of “early”. This may explain why 60 listeners transcribed “I” in “I lived”, “I lay”, “I let”, “I led”, “I reigned”, and “I really”.

In addition to problems with the mid-central vowel, the vowel quality in the second syllable may be a contributory factor to the intelligibility breakdown. For instance, 12 listeners wrote “I lay” in place of “early”. This response is the exact match of the speakers’ pronunciation, and it reveals that they have orthographically represented the two sounds [a] (in the first syllable) and [eɪ] (in the second syllable) used by the speaker.

There are many semantic cues available to the listeners that could aid the intelligibility of the word. But it seems the listeners have relied mainly on pronunciation cues. The words they have suggested to fill the slot do not fit the context of the word. Sometimes, it appears the listeners have used their syntactic knowledge to help decipher the word they heard even when it does not make sense.

32 listeners did not write anything for the word as indicated by the question marks on their sheet. Of the 32 listeners, 14[69] wrote “I????”. It is quite possible that these listeners heard [a] but since they cannot relate what they heard to “early”, they left the word and put question marks symbols to indicate that they have a problem. This is just a speculation. The remaining 18 listeners did not respond to the word. It is difficult to conclude on which of the two features of pronunciation

[69] This number represents the following nationalities: (11 British, 1 Brazilian, 1 Indian, 1 Spanish)

caused the problems for these 18 listeners[70] (Deterding and Mohamad, 2016; Deterding, 2014; Kaur 2009).

Could the first vowel be responsible, or could it be because of the diphthongal pronunciation in the second syllable or a combination of the two? My observation from the listeners' transcription is that listeners who perceived and recognised the variant [a] are greater in number than those unable to write something down. In sum, my findings suggest that patterns of the mid-central vowel [ɜ:] are a major contributory factor for the problem in this case (Deterding and Mohamad, 2016; Chen et al., 2012; Deterding, 2010; 2011; Jenkins, 2002) though I cannot ignore the contribution of the second syllable issue.

Moving now to Token 36, where speaker three pronounced "certain" as [ˈsatɪn], in the phrase "China wants certain of our commodities". I observed that similar to the previous case of "Early", the vowel quality in the first syllable of "certain" [ˈsɜ:tᵊn] was pronounced with a front vowel [a], as well as a short vowel (see section 6.1.1.5 for vowel length). In addition to this pronunciation, the vowel in the final syllable was pronounced with a close short lax vowel [ɪ] (see Section 6.1.4), and the context in which the word occurred seems to be unfamiliar. The word "certain" (pronounced [ˈsatɪn]) caused intelligibility breakdown for 86 listeners who responded as follows:

[70] These listeners are made up of the following nationalities: (3 British, 2 Germans, 3 Italians, 1 Singaporean, 2 Spanish, 1 polish, 1 Iranian, 1 Chinese, 1 South African, 1 Saudi Arabian, 1 Norwegian, and 1 Ghanaian)

	Listeners' responses	NOL	ORP	ORA	SA	CA	SC	NR
1	China wants *acting* of our commodities	15 listeners[71]	✓					
2	China wants *act in* of our commodities	11 listeners[72]	✓					
3	China was *access* to our commodities	1 listener[73]	✓		✓		✓	
4	China wants *fracting* of our commodities	4 listeners[74]	✓					
5	China wants *half* of our accomodities	1 listener[75]	✓		✓	✓	✓	
6	China wants *something* of our commodities	9 listeners[76]		✓	✓		✓	
7	China wants *satin* of our commodities	3 listeners[77]	✓					
8	China wants??????? of (our commodities)	36 listeners[78]						✓
9	China wants??????? our economy	6 listeners[79]						✓

Most of the listeners' responses demonstrate that they do not know this pronunciation of the word and so they may have resorted to using pronunciation cues to identify the word in similar ways as Deterding's (2014) participants did. Most of the listener's responses, in the table given above, show an orthographical representation of the vowel variant [a] used by the speaker. This may suggest that using [a] where [ɜ:] is used in the reference accent is a major issue. Listener responses such as "fracting" and "something" reveal that they recognised the friction of the first sound in "certain". It is also important to note that majority of

[71] (5 British, 1 American, 1 Russian, 1 Saudi Arabian, 1 Indian, 1 Malawian, 1 Polish, 1 Norwegian, 1 South-Korean, 1 Spanish and 1 French)
[72] (3 Americans, 4 British, 1 Italian, 1 Russian, 1 British, 1 Malawian)
[73] British listener
[74] (2 British, 1 Italian, and 1 Austrian)
[75] 3 British listeners
[76] (4 British, 1 Greek, 2 Ghanaians, 1 Singaporean and 1 Iranian)
[77] 3 British listeners
[78] (7 British, 4 Spanish, 5 Indians, 5 German, 4 Norwegians, 2 Chinese, 1 Thai, 1 Brazilian, 1 Romanian, 1 Nepalese, 1 Polish, 1 French, 1 Ghanaian, and 1 Saudi Arabian
[79] (4 British, 1 Indian and 1 Norwegian)

the listeners orthographically represented the vowel quality [ɪ] used by the speaker in the second syllable of “certain” (see Section 6.1.4). So, it may be that vowel length is a contributory factor to the cause of intelligibility problems (see Section 6.1.5). For instance, three British listeners wrote “satin” in place of the target word “certain”. This response demonstrates the exact match of the speakers’ pronunciation, and it reveals that they have orthographically represented the two vowel sounds used by the speaker.

In (8) and (9), forty-two (42) listeners left the space for the word blank. In this case, as in many other instances in my analysis, identifying the cause of the problem was not a straightforward matter. It could be the use of front vowel [a] in the initial syllable; the vowel length or the use of close vowel [ɪ] in the final syllable or a combination of all these.

A critical look at all the responses reveals that most of the vowels represented by the listeners’ transcriptions are front vowel [a], and not mid-central [ɜ]. Thus, the use of variant [a] where [ɜ:] is used in the reference accent seems to be the major problem. This conclusion echoes the research results of Deterding (2011). In his study, a listener from Indonesia did not understand a speaker from Myanmar who pronounced pear as [a:].

I shift attention now to another factor, apart from vowel quality in “certain”, that may appear to have made it difficult for listeners to decipher the word. This other factor is the context in which the speaker used the word. If the example had been “I was certain I left my keys on the table”, they are likely to have understood the

word “certain” (Kennedy and Trofimovich, 2008). An alternative hypothesis is that the frequency of “commodities” (the word that followed “certain”) has left the listeners unsure about the word “certain”. Because “commodities” is not a high-frequency word, it may be less familiar to people who are non-English speakers (Kuo, 2013; Chen et al., 2016). In the Corpus of Contemporary American English (COCA 2013) – a 450 million word corpus, the word appeared 2770 times and in the spoken component of the British National Corpus, for example, a 100 million corpus, “commodities” appeared 580 times in all domains. In VOICE (a 1 million-word international corpus of English), the term did not appear in the corpus. Thus, being an unfamiliar word may seem to have contributed to the reason most listeners left “certain” blank (Schadech, 2013; Ellis 2011; 2012).

One might note that apart from “early” and “certain”, there were two other words in Speaker three’s speech in which the mid-central vowel /ɜ: / was expected in the reference accent. These words are “first” (occurred on three occasions), and “twenty-first”. The extract given below shows the wider context in which these words appeared.

> *Extract 6.4.*
> *Context*: /… hmm I believe, I was the **first [**ˈfɜːst] or one of the **first** [ˈfɜːst],/ if not the **first** [ˈfɜːst] as an African leader/ who hmm established strategic partnership with China/ **early** [ˈaleɪ] in the **twenty-first** [twentiˈfɜːst] century. /and what do what are we saying? /we are saying yes…/What does China want from us? /China wants **certain** [ˈsatɪn] of our commodities… (Speaker three, unit 1- 24).

In this extract, speaker three pronounced the vowel in “first” with the [ɜː] mid-central vowel and “twenty-first” was pronounced as [twentiˈfɜːst] with the mid-

central vowel in the second word. The three occurrences of “first” and “twenty-first” (see Extract 6.4) caused no intelligibility problems for listeners as they transcribed the word correctly on their sheet. However, when [a] was pronounced intelligibility occurred.

In Token 42, Speaker four pronounced “introvert” [ˈɪntrəvɜːt] as [ˈɪntrəvat] in the phrase “I’m an introvert person”. The context for Token 42 is shown in extract 6.5.

> *Extract 6.5.*
> *Context:* … a lot of people don’t get to know that/ I’m an **introvert** [ˈɪntrəvat] **person** [ˈpɛːsən]. (unit 8)/ … by the time, I get back into my privacy, (unit 15) / I like, start to **work** [ˈwɔːk] on it (unit 16) /and before you know it, (unit 17)/I’ve finished writing a movie. (unit 18)/ And for me to actually get what I want, (unit 19) / in whatever I had written, (unit 20) / I prefer to produce it myself (Speaker four, unit 7-21).

In this extract, the vowel in the final syllable of “introvert” was pronounced with [a]. This distinct pronunciation caused loss of intelligibility for 50 listeners who responded as follows:

	Listeners’ responses	NOL	ORP	ORA	SA	CA	SC	NR
1	I’m an *intro????* person	11 listeners[80]		✓				
2	I’m an *intellect* person	1 listener[81]		✓	✓		✓	
3	I’m an *interrupt* person	1 listener[82]		✓				
4	I am a??????? person	8 listeners						✓
5	I am a *???????????*	20 listeners						✓
6	I need the *right* person	3 listeners	✓		✓		✓	
7	I’m a vast person	2 listeners[83]	✓					
8	I’m an *intro vat* person	4 listeners[84]	✓					

[80]These listeners are made up of the following nationalities: (9 British, 1 American, 1 Spanish)
[81] Spanish listener
[82] British listener
[83] British listeners
[84] British listeners

In this token, the alternative realisation to [ɜ:] seems to be causing the intelligibility loss. This is reflected in the listeners' responses. In (7) and (8) of the transcription above, the responses (vast and introvat) indicate that the listeners have recognised the actual quality of vowel [a] used by speaker four. This does not correspond to the context of the word, but they have put down what they heard. Sometimes, listeners have deciphered the first two syllables but not the last syllable (as in example 1, 2 and 3). This may indicate that the problem is the use of [a] where [ɜ:] is anticipated in the final syllable. In (6), three British listeners filled the slot with "right". Since the vowel in "right" was realised by [a:] by some English speakers, this response indicates that they may have focused on the [a] type of vowel used by speaker four.

In (4) and (5), twenty-eight listeners[85] found the word *introvert*, unintelligible which depict that they cannot relate what they have heard with the context. Even though the term "person" in "I am an introvert person" could have given some explicit contextual clues to the meaning of the word "introvert", 50 listeners[86] still had problems with this pronunciation of the word.

Finally in Token 43, speaker four pronounced *person* /ˈpɜ:sən/ as [ˈpɛ:sən] in the phrase "I am an introvert person' (see extract 6.4). The vowel in the first syllable of "person" was pronounced with an open front vowel [ɛ:], causing intelligibility breakdown for 22 listeners. A further breakdown shows that these 22 listeners

[85] (6 Norwegians, 4 Americans, 2 Chinese, 1 Thai, 4 Indians, 1 Polish, 2 British, 1 Iranian, 1 Singaporean, 1 South Korean, 1 Greek, 1 German, 1 Spanish, 1 French and 1 Italian)

[86] Out of the 50 listeners who misunderstood *introvert*, 15 were British (out of 37), 4 Indians (out of 7), 6 Norwegians (out of 6), 5 Americans (out of five), and three were Spanish (out of six).

did not identify the word “person”. The intelligibility breakdown occurred probably because of the vowel quality [ɛː], which was used in the first syllable of “person”. However, the earlier failure to understand the word “introvert”, which occurred before “person” (see extract 6.5) may also have been a contributory factor (Deterding, 2014).

Taken together, these findings support the observations other scholars made relating to the fact that the alternatives to a mid-central vowel [ɜː] caused problems in intelligibility (Jenkins 2000; 2002; 2006; 2007; 2009; Deterding and Kirkpatrick 2006; Walker, 2010; Deterding, 2010; 2013).

Before moving away from my discussion of findings relating to the mid-central vowel, I will consider the three words in which the alternatives to [ɜː] was not an issue. These cases occurred in Speaker five’s excerpt.

> *Extract 6.6.*
> *Context:* Well, I think that the biggest achievement for 2012/ has been our ability to consolidate on the gains/ that we have made in the past/ to deepen access of our people to **services** [ˈsavɪsəz]/road **networks** [netwɔːks], health care, education, opportunities for jobs/…but em I think the point to make first [ˈfɜːst] is that/capacity building is critical,/knowledge, education, skilled engineers,/skilled teachers to produce those engineers/and to develop the human capital /that will deliver all of the **services** [ˈsavɪsəz]… (Speaker five, unit 1-26)

In this extract, the speaker pronounced the vowel in the first syllable of “services” with an open front vowel [a], while the vowel quality in the last syllable of “network” was said with a mid-open back vowel [ɔː]. In contrast to the previous speakers mentioned earlier, it is interesting to note that “services” (pronounced as

[ˈsavɪsəz]) and “network” (pronounced as [netwɔ:k]) are the only two examples where the alternatives to [ɜ:] did not cause problems for listeners. One explanation for this could be that listeners are probably using the context in which the word occurred to guess the word correctly. The presence of the prefix word “net” probably leads to the intelligibility of “work”. Another explanation for this could be that listeners having earlier listened to the previous four Nigerian speakers, became aware that Nigerian speakers regularly transfer the pronunciation of the mid-central vowel [ɜ:] as either vowel [a] or [ɔ:] to their English (Deterding, 2014; Kaur, 2009). Thus, the listeners probably may have adjusted or accommodated to Speaker five’s speech in this respect and may have been aware that the mid-central vowel sound could often be pronounced as front vowel [a] or back vowel [ɔ:].

In summary, there were three tokens, 5, 46 and 62, in which the alternatives to [ɜ:] was the sole factor causing intelligibility breakdown or misunderstanding. In Token 5, the use of the vowel variant [ɔ:] in “work” by Speaker one caused intelligibility breakdown for 24 listeners who wrote “walk”. This response demonstrates that listeners orthographically represented the sound [ɔ:] used by the speaker. Based on this, I argue that the vowel quality [ɔ:] used was the cause of unintelligibility. In Token 46, Speaker four used the back vowel [ɔ:], in “work”, the same way speaker one did. This distinct pronunciation caused intelligibility failure for 29 listeners. 26 of them wrote “walk”, which indicates an orthographical representation of the actual phoneme used by the speaker. In Token 62, “burden” [ˈbɜ:dᵊn] pronounced as [ˈbɔ:dᵊn] by speaker six caused intelligibility breakdown for 42 listeners. This word pronunciation was heard as “board”, “boring”, “broad”

and “broaden”, which shows that the listeners have orthographically represented the sound variant used by the speaker. This further demonstrates that it is the mid-central vowel /ɜː/ that is the only cause of the intelligibility breakdown.

Moreover, there are five tokens (19, 26, 36, 42 and 43) where alternatives to the mid-central vowel [ɜː] were not the only factor that caused intelligibility breakdown. For instance, In Token 19, the use of open front vowel [a] in the third syllable of “universalism” caused intelligibility breakdown for 64 listeners. In this case, there appears to be a build-up of issues: the difference in vowel quality and the difference in length of the vowel. Apart from the vowel variant used in the third syllable of “universalism”, it also appears that the context in which the word occurred was unfamiliar to the participants because they lack the relevant contextual background. In Token 26, “early” [ˈɜːli] pronounced as [ˈaleɪ] by speaker three caused intelligibility breakdown for 78 listeners. In this case, the difference in vowel quality on the first syllable; the difference in the length of the first vowel, and the difference in the quality of the vowel on the final syllable all seems to have led to the intelligibility breakdown. In Token 36, “certain” [ˈsɜːtən] pronounced as [ˈsatɪn] caused intelligibility breakdown for 86 listeners. In this instance, the use of vowel quality [a] on the first syllable; the difference in the length of the vowel (to be discussed in Section 6.1.5), and the use of front vowel [ɪ] in the final syllable (to be discussed in section 6.1.4) seems to have caused the breakdown. In Token, 42, “introvert” [ˈɪntrəvɜːt] pronounced as [ˈɪntrəvat] caused loss of intelligibility for 50 listeners. In this case, the use of vowel [a] in the final syllable and the difference in the length of vowel seem to have caused the intelligibility breakdown. Finally, in Token 43, the use of [ɛː], in the initial

syllable of “person” caused intelligibility breakdown for 22 listeners. In addition to the vowel variant used in the first syllable, the earlier failure to understand the word “introvert”, which occurred before “person” (see extract 6.5) may have contributed to the intelligibility breakdown.

In conclusion, there appears to have been a number of contributory factors in five of the eight tokens that caused intelligibility breakdown due to alternatives to mid-central vowel [ɜ:]. However, as discussed, in tokens, 5, 46 and 62 the vowel variant used was the only attributable factor. On the basis of these findings, I suggest that the distinct vowel used in Tokens 19, 26, 36, 42 and 43 was at the very least a contributory factor in the breakdown of intelligibility. It might be the sole factor, or it could be a contributory factor, but I draw on the support of the straightforward tokens to draw my conclusion here.

The following section is a consideration of another central vowel responsible for intelligibility breakdown when international listeners listened to Nigerian speakers.

6.1.2 Mid Central Vowel /ə/ (Schwa)

Nigerian English speakers seldom use the mid-central vowel /ə/ (schwa) probably because it is absent in the phonemic inventory of Nigerian English. It is commonly realised by the vowels [a, e: i, ɛ, ɪ, ɔ, ɒ] (Bobda, 1995; Adetugbo 2009; Josiah and Babatunde 2011). In this present study, I observed that some of the vowels (e.g. open front [a], open-mid front [ɛ]) pronounced instead of [ɜ:] as discussed in section 6.1.1 are also used for the schwa [ə]. There are nine tokens in which alternatives to the reference accent [ə] may have contributed to instances of intelligibility breakdown in this present study, and they are shown in Table 6.3.

Table: 6.3. Intelligibility breakdown involving [ə] vowel

Token no	**Speaker**	**Word/text**	**Pronunciation**	**Instances of Breakdown**
17	Two	moral	[ˈmɒra]	24
18	Two	moral	[ˈmɒra]	32
54	Five	total	[ˈto:ta]	29
56	Five	critical	[krɪ rɪˈka]	38
29	Three	revenue	[rɛvɛˈnju:]	43
33	Three	interest rate	[ɪnˈtrɛst ˈreɪt]	32
36	Three	certain	[ˈsatɪn]	86
47	Five	deepen	[dipɪn]	36
37	Three	our commodities	[ɑ:ˈkɒ mɒditiz]	33

In the first four Tokens (17, 18, 54, and 56) the mid-central vowel [ə] was pronounced as open front vowel [a]; in the fifth and sixth (Tokens 29 and 33), it was pronounced as open-mid front vowel [ɛ]; in the seventh and eighth (Token 36 and 47), it was pronounced as short lax vowel [ɪ] and in the final one, Token 37, was pronounced with an open back vowel [ɒ]. In all the nine tokens, there are no clear-cut cases of intelligibility breakdown where alternatives to [ə] were the sole cause of intelligibility breakdown. However, in all these tokens, the

alternative realisation to the reference accent [ə] may have contributed to an instance of intelligibility breakdown. In what follows, I analyse the nine tokens in more detail.

In Token 17 and 18, speaker two pronounced the word “moral” /ˈmɒrəl/ as [ˈmɒra] and this caused intelligibility failure for listeners. Before analysing these two tokens in more detail, the wider context in which they occurred is given in the context below:

> *Extract 6.7*
> *Context*: I find the very notion of political correctness/ very condescending. /hmm it’s an assumption of a kind of hmm hmm/ standing on high **moral** [ˈmɒra] grounds/ and hmm presuming that others cannot quite attain/ that **moral** [ˈmɒra] height or even cultural universalism… (Speaker two, unit 1- 6)

In the first occurrence of “moral”, speaker two pronounced moral [ˈmɒrəl] as [ˈmɒra] in the phrase “standing on high moral grounds…” (Speaker two unit 4). There are two segmental issues here and I will consider them in turn. First of all, the vowel of the second syllable (/ə/ for the reference accent) was pronounced as vowel variant [a]. In addition to this, a pronunciation variant lacking the dark [l] was used in the coda of the same syllable. This distinct pronunciation led to 24 instances of unintelligibility with listeners who responded as follows:

	Listeners’ responses	NOL	ORP	ORA	SA	CA	SC	NR
1	standing on high *more* grounds	9 listeners	✓					
2	standing on high *?????* grounds	15 listeners						✓

As shown above, 9 listeners[87] wrote *more* which suggests that they identified the first syllable but did not recognise the second syllable. This response seems to suggest that the problem is in the second syllable. 15 listeners[88] did not write anything for the word which may demonstrate that they could not relate what they heard to the context in which the word was produced.

As Speaker two proceeded with his speech, he repeated the word *moral* /ˈmɒrəl/ as [ˈmɒra] (see Extract 6.7) with the use of [a] in the second syllable and the non-use of [l] in the same syllable. This pronunciation led to 32 instances of unintelligibility with listeners. Below are the listeners' interpretations of the word.

	Listeners' responses	NOL	ORP	ORA	SA	CA	SC	NR
1	that *???????* height	17 listeners						✓
2	that *more* height	11 listeners	✓					
3	that *moor* height	4 listeners	✓					

In (1) of the transcriptions above,17 listeners failed to respond as they did not write anything for the word "moral". It is difficult to say what the problem is for these 17 listeners as they did not respond. However, what I can infer from those that misidentified "moral" is that they perceived the first syllable but did not recognise the final syllable, which suggests the issue is in the final syllable. For example, in example (2) and (3), 11 listeners heard *moral* as "more" and four listeners as "moor". These responses imply that the listeners recognised the first syllable but did not identify the second syllable probably because of the full vowel [a] in the ultimate syllable and the non-realisation of dark [l].

[87] (3 Spanish, 1 Thai, 1 Indian, 1 Norwegian, 1 Ghanaian, 1 Greek, 1 South Korean)
[88] (6 British, 1 Norwegian, 2 Chinese, 3 Indians, 2 Malawians, 1 Spanish)

There are examples in Speaker five's talk which further support the observation made so far. In Token 54, Speaker five pronounced the word *total* as [to:ta] in the given extract:

> *Extract: 6.8*
> *Context*…and we thought that/ those sectors were not interdependent/ but they were independently enabling/ to create **total** [to:ta] growth in the economy" (Speaker five, unit 14-17).

The vowel in the second syllable of *total* was pronounced with a full vowel [a]. The pronunciation of the word was problematic for 29 listeners who did not identify the word and thus, did not write anything on their paper. In addition to this problem, one other segmental feature of pronunciation contributes to this intelligibility failure: the absence of [l] in the final syllable (This will be discussed in section 6.2.1).

In Token 56, "critical" /ˈkrɪtɪkᵊl/ was pronounced as [krɪ ɾɪˈkɑ] by speaker five in "…but em I think the point to make first is that capacity building is critical…". Similar to the previous token, a vowel variant [a] is used in the final syllable of "critical". This consequently led to a stress difference. In addition to this pronunciation, there is no [l] in the coda of the final syllable (to be discussed in Section 6.2.1), while the second syllable was pronounced with an alveolar tap [ɾ]. The pronunciation of the word *critical* caused intelligibility problems for 38 listeners who responded as follows:

	Listeners' responses	NOL	ORP	ORA	SA	CA	SC	NR
1	capacity building is *credit card*	12 listeners	✓					
2	capacity building is *(????????)*	16 listeners						✓
3	capacity building is????*card*	10 listeners	✓					

The issue here was deciding what the cause of intelligibility breakdown was. Examining the data, 16 listeners[89] left a blank slot suggesting that the word was unintelligible to them. 10 listeners[90] misheard *critical* as "card" which may reveal that the full vowel [a] used by the speaker on the final syllable is an issue. 12 listeners misheard *critical* as "credit card". The issue here seems to be the result of the use of [a] in the final syllable. This is because the latter is a typical American English pronunciation and was not found to reduce the intelligibility of international listeners elsewhere in the present study. This result is in contrast with Jenkins (2000) who argues that alveolar tap or voiced flap [ɾ] has the potential to cause confusion because it is closer to /d/ rather than /t/.

One might observe that apart from Token 54, and 56 discussed above, there was one other word in speaker five's extract in which schwa [ə] was pronounced with [a]. This is the word "capital" in the phrase "…and to develop the human capital/that will deliver all of the services..." The vowel quality in the last syllable of "capital" was pronounced with a full vowel [a]. In contrast to the tokens mentioned earlier, it is interesting that "capital" pronounced [ˈkæpɪta] is the only example in speaker five's speech where alternatives to schwa [ə] did not cause

[89] (9 British, 2 Norwegians, 1 Spanish, 1 Chinese, 1 Saudi-Arabian, 2 Indians)
[90] (8 British, 2 Spanish)

a problem for listeners. One explanation for this could be that listeners are probably using the context in which the word appeared to identify the word correctly (Kennedy & Trofimovich, 2008). That is, the presence of the word "human" in the wider context probably leads to the correct interpretation of "capital". A further explanation could be that because "capital" is made towards the end of speaker five speech, the listeners may already be accustomed to the pronunciation of schwa as [a].

Before leaving, mid-central vowel [ə], we might look at Tokens 29, 33, 47, and 36 (See Table 6.3) where [ə] was pronounced with an open-mid front vowel [ɛ] and short lax vowel [ɪ]. In Token 29, Speaker three pronounced "revenue" [ˈrevənjuː] as [rɛvɛˈnjuː] in "…to have reasonable revenue from our resources". The vowel quality in the second syllable was pronounced with a cardinal three [ɛ]. In addition to this pronunciation, there is a different stress pattern which is traceable to the influence of the syllable-timing rhythm of the speaker's mother tongue. The pronunciation of "revenue" as [rɛvɛˈnjuː] caused intelligibility breakdown for 43 listeners. The extract below gives the wider context in which *revenue* was misidentified and listeners' interpretations of the word:

> *Extract 6.9*
> *Context*: We want something and what do we want? / We want to be able/ to have reasonable **revenue** [rɛvɛˈnjuː] from our resources… (Speaker three, unit 9-11)

	Listeners' responses	NOL	ORP	ORA	SA	CA	SC	NR
1	to have reasonable????? from our resources	10 listeners						✓
2	to have reasonable new resources	7 listeners		✓	✓		✓	
3	to have????? *?????* from our resources	19 listeners						✓
4	to have reasonable *value* from our resources	6 listeners		✓	✓		✓	
5	to have reasonable *usage* of our resources	1 listener		✓	✓		✓	

From the listeners' responses, 29 listeners[91] found the word "revenue" unintelligible as they did not write anything for the word. Of the 29 listeners, 19 did not identify the previous word *reasonable*. It is difficult to tell whether this contributed to the intelligibility breakdown as even if these 19 listeners had understood *reasonable* correctly, they may still not have understood *revenue* as the other listeners did. In (2), seven listeners[92] interpreted the word *revenue* as "new" [nju:] which reveals that they recognised the last syllable of "revenue" but not the first two syllables which could be partly because of the alternative realisation to the referent sound [ə] and the difference in stress pattern. In (4), a response such as "value" by six listeners[93] may indicate that the listeners perceived the onset of the second syllable (voiced labiodental fricative /v/) but misheard the vowel. They have also perceived /ju:/, which could suggest that the last syllable is not an issue. In (5), a listener interpreted *revenue* as "usage" [ˈjuːsɪdʒ] which implies she identified the last syllable /ju:/ but omitted the previous syllable.

[91] (9 British, 5 Germans, 2 Greeks, 1 Romanian, 4 Norwegians, 2 Spanish, 2 Mandarin Chinese, French, Italian, Thai and Indian)
[92] (1 South Korean, 3 British, 1 Norwegian, 1 Nepalese, 1 Austrian)
[93] (1 Indian, 1 Norwegian, 4 British)

A critical look at all the transcriptions reveals that all those who misunderstood *revenue* omitted the second syllable. This demonstrates that the quality of vowel used by the speaker in the second syllable could be the cause of the intelligibility breakdown. In addition, the listeners' responses also show that the first syllable was omitted. This could be because of the difference in stress pattern used by the speaker. This may also explain why all those who misunderstood revenue perceived the /ju:/ in the final syllable.

In Token 33, Speaker three pronounced "interest rate" [ˈɪntrəstˌreɪt] as [ɪnˈtrɛstˈreɪt] in the phrase "…or we take loan at reasonable interest rate". Here, the vowel in the second syllable of "interest" was pronounced with the vowel [ɛ]. In addition to this variant, a different stress pattern occurred on the second syllable with primary stress placed on "rate". The word "interest rate" caused intelligibility breakdown for 32 listeners who responded as follows:

	Listeners' responses	NOL	ORP	ORA	SA	CA	SC	NR
1	or we take loan at *?????trait*	1 listener		✓				
2	or we take loan at reasonable*?????*	2 listeners						✓
3	or we take loan at????? *?????*	10 listeners[94]						✓
4	or we take loan at *?????rate*	16 listeners[95]						✓
5	we take loan at reasonable *in translate*	1 listener		✓				
6	or we take loan at *in trust rate*	1 listener		✓				
7	or we take long to *transfer*	1 listener		✓				

[94] (2 British, 1 South Korean, 1 Russian, 1 Norwegian, 1 German, 1 Chinese, 1 American, 1 Italian, and 1 French)

[95] (11 British, 2 Americans, 1 Polish, 1 Norwegian and 1 German)

As shown in the above transcription, 1 listener[96] wrote “trait” which could indicate that he heard the last sound of “interest” and the last word “rate”. This may suggest that the vowel variant [e] caused the intelligibility problem although a difference in stress placement could be a contributory factor. 12 listeners did not identify the word and thus, did not write anything down. Out of these 12 listeners, ten did not interpret the word that preceded “interest rate” which could be one of the reasons why they could not interpret the target word. In (4), 16 listeners wrote: “rate”, which reveals that the word “interest” instead of “rate” was the problem. The responses in (5) and (6) demonstrate that the vowel quality on the second syllable of “interest” was misunderstood as [æ]. In (6), a listener[97] heard *interest rate* as “intrust rate” which demonstrates that the first syllable and consonant clusters in the final syllable were identified but the vowel quality on the second syllable of *interest* was misunderstood as [ʌ]. One needs to be cautious in example (6) because response such as “intrust rate” could be a spelling mistake from the listener.

In Token 36, speaker three pronounced *certain* [ˈsɜːtən] as [ˈsatɪn] with the variant [a] in the first syllable (already discussed in section 6.1.1) and the vowel variant [ɪ] in the second syllable. This pronunciation caused intelligibility failure for listeners. Before analysing this token in detail, the wider context in which it occurred is given below.

[96] (1 French listener)
[97] A Chinese listener

Extract 6.10
Context: What does China want from us? /China wants **certain** [ˈsatɪn] of our commodities/ to enhance their own development and keep it going/ (Speaker three, unit 23-25).

The word “certain” (pronounced [ˈsatɪn]) caused intelligibility breakdown for 86 listeners. The examples below give listeners transcriptions of the word:

	Listeners’ responses	NOL	ORP	ORA	SA	CA	SC	NR
1	China wants *acting* of our commodities	15 listeners	✓					
2	China wants *act in* of our commodities	11 listeners	✓					
3	China was *access* to our commodities	1 listener	✓		✓		✓	
4	China wants *fracting* of our commodities	4 listeners	✓					
5	China wants *half* of our accomodities	1 listener	✓		✓	✓	✓	
6	China wants *something* of our commodities	9 listeners	✓		✓		✓	
7	China wants *satin* of our commodities	3 listeners	✓					
8	China wants??????? of (our commodities)	36 listeners						✓
9	China wants??????? our economy	6 listeners						✓

In this token, apart from the alternative to [ɜ:] in the first syllable which seems to be the main cause of intelligibility breakdown (as already discussed in Section 6.1.1), the quality of vowel [ɪ] used by the speaker in the second syllable may be a contributory factor to this intelligibility breakdown. This is because 42 out of those who misunderstood the word *certain* perceived [ɪ] in the final syllable of “certain” as seen in examples such as “fracting”, “satin”, “something”, “acting” and “act in”.

I will consider more examples that support the observations made so far. In Token 47, *deepen* [di:pən] was pronounced as [dipɪn] with what sounds like a close front vowel [ɪ] in the final syllable. The word caused intelligibility breakdown for 36 listeners who responded as follows:

	Listeners' responses	NOL	ORP	ORA	SA	CA	SC	NR
1	to *dip in* access of our people to services	23 listeners	✓					
2	to *dipping* access of our people to services	12 listeners	✓					
3	to *differ* in access of our people to services	1 listener	✓					

In this token, in addition to the duration of the vowel in the first syllable which seems to be the main cause of intelligibility breakdown (this will be discussed in Section 6.1.5), the quality of vowel [ɪ] used by the speaker in the final syllable could be a contributory factor to the cause of the breakdown. This is because all those who misunderstood the word *deepen* orthographically represented the variant used by the speaker as seen in examples, such as "dip **in**", "dipp**ing**", and "differ **in**".

Moving finally to examine Token 37, the only one in which schwa [ə] is pronounced with an open back vowel [ɒ] (see Table 6.3). In Token 37, speaker three pronounced "our commodities" [ɑːʳ kəˈmɒdətiz] as [ɑːˈkɒ mɒditiz] in "China wants certain of our commodities". The pronunciation shows the use of an open back vowel [ɒ] in the initial syllable of "commodities". In addition to this pronunciation, there was a difference in stress placement, and the use of [i] vowel on the third syllable of "commodities". The pronunciation caused 33 instances of

intelligibility breakdown with listeners. The examples below show the transcriptions from the listeners who had problems understanding the word.

	Listeners' responses	NOL	ORP	ORA	SA	CA	SC	NR
1	China wants (certain) of *accomodities*	10 listeners	✓					
2	China wants???? our *economy*	6 listeners	✓					
3	China wants certain of *accommodate*	1 listener	✓					
4	China wants???? of *accommodating*	1 listener	✓					
5	China wants????? of *(?????)*	15 listeners						✓

As observed from the listeners' interpretation presented, 15 listeners did not write anything for "our commodities" while those who attempted to make a suggestion seem to have used the perceptual and acoustic cue to work out what the word is. That could be the reason why the listeners' transcriptions give the first spelling as "a" and the first vowel in "commodities" as back vowel [ɒ]. For example, "our commodities" was heard by 10 listeners as "accomodities", which suggests that the first vowel in *commodities* and stress difference are causes of the problem for these listeners. Six listeners heard the phrase to be "our economy", which indicates that their attention is on this pronunciation of back vowel [ɒ] although the earlier failure to understand "certain" may seem to be a contributory factor. In (3) and (4), Listener 74, and Listener 3 wrote "accommodate", "accommodating" respectively. These indicate that it is the use of open back vowel [ɒ] in the first syllable of "commodities", and the stress placement that caused intelligibility breakdown for these two listeners.

Considering transcriptions from all these listeners, the inability to understand the phrase “our commodities” ([ɑːˈkɒ mɒditiz] as pronounced by speaker three) was possibly caused by the confusion posed by the open back vowel [ɒ] used in the initial syllable of “commodities” and the difference in stress pattern. Thus, one may argue that the use of the open back vowel instead of schwa was the major cause of unintelligibility.

In conclusion, in all the tokens (17, 18, 54, 56, 29, 33, 36, 47 and 37) listed in Table 6.3, alternatives to [ə] vowel seems to be a contributory factor in the cause of the intelligibility breakdown. However, it must be admitted that in all the tokens, some other pronunciation features made a significant contribution to the intelligibility problem. For example in token 17, 18, 54, and 56, the non-realisation of [l] in “moral”, “total” and “critical” could be a contributory factor (to be discussed in Section 6.2.1); in token 29, 33, and 37, the stress pattern used in “revenue”, “interest rate” and “our commodities” respectively is another factor. In token 36, the quality and length of vowel in the initial syllable of “certain” seems to be a contributory factor (as discussed in Section 6.1.1). Finally, in token 47, the length of the vowel could be a contributory factor (see Section 6.1.5).

The next section looks at the intelligibility breakdown arising because of a distinct pronunciation of the referent sound /ʌ/.

6.1.3 Open-mid Central Vowel /ʌ/

There were ten tokens in which a less familiar pronunciation of the referent sound /ʌ/ may have contributed to an instance of intelligibility breakdown. These ten tokens are shown in Table 6.4.

Table: 6.4. Intelligibility breakdown involving [ʌ] vowel

Token no	**Speaker**	**Word**	**Pronunciation**	**Instances of Breakdown**
2	One	other	[ɔðə]	32
3	One	nothing	[ˈnɔtɪn]	65
7	One	must	[mɔs]	29
8	One	Sundays	[sɔ̃ndiz]	30
11	One	money	[ˈmɔni]	26
23	Two	among	[əˈmɔŋ]	25
30	Three	must	[mɔ bi]	48
48	Five	budgeting	[bɔˈdʒɛtɪŋ]	43
50	Five	agriculture	[ˈaːgrɪkɔːtʃəˈ]	31
64	Six	buck	[ˈbɒk]	50

I will first consider Tokens, 2, 3, 7, 8, and 64 because these are clear cases where alternatives to open mid-central vowel [ʌ] were the sole cause of the intelligibility breakdown. Next, I will discuss complex cases where multiple problems may have caused the breakdown. In Token 2, speaker one pronounced the word "other" [ʌðə] as [ɔðə] in the phrase "so playing Jennifer and playing other roles…," (Speaker one, unit 4). She used vowel variant [ɔ] in the first syllable of "other". This distinct pronunciation presumably caused intelligibility breakdown for 32 listeners who responded as follows:

	Listeners' responses	NOL	ORP	ORA	SA	CA	SC	NR
1	So, playing Jennifer and playing */????/* roles	13 listeners						✓
2	So, playing Jennifer and playing *the* roles	19 listeners		✓	✓	✓	✓	

As shown above, 13 listeners did not interpret the word as they did not write anything despite the indicative context. 19 listeners interpreted the word *other* as “the”. Examining these listeners’ transcriptions here, one can observe that they correctly identified the second part of the word [ðə] but omitted the first syllable. This may explain why it is the use of open-mid back vowel [ɔ] in the first syllable that caused intelligibility breakdown.

In Token 3, Speaker one (a Nigerian actress) is talking about the role she played in her recent movie. She pronounced the vowel in the first syllable of “nothing” as [ɔ] where the reference accent would use [ʌ]. Along with this pronunciation, the onset of the second syllable was produced with an alveolar plosive [t], while the coda of the same syllable was pronounced with an alveolar nasal [n]. So, she said [ˈnɔtɪn] in the phrase “… has nothing to do with my person”. The wider context for the word is shown in extract 6.11.

> *Extract 6.11*
> *Context*: I am not worried because I’m an actress, / I should be able to play any role/and am supposed to be versatile as an actress/so playing Jennifer and playing other roles/has **nothing** [ˈnɔtɪn] to do with my person… (Speaker one, unit 1-5)

The pronunciation of the word “nothing” as [ˈnɔtɪn] caused intelligibility breakdown for 65 listeners. This was one of the major intelligibility breakdowns where [ˈnɔtɪn] was abandoned as they did not transcribe the word. A number of explanations seem plausible for the cause of the breakdown. Could it be the vowel quality used on the first syllable or the consonants used in the second syllable?

My analysis suggests that the use of [ɔ] was the cause of intelligibility breakdown in this case while the use of alveolar plosive [t] for dental fricative [θ] and alveolar nasal [n] for velar [ŋ] seems not to have been an issue for respondents. Three sets of findings support my argument. (1) The word “nothing” occurred in speaker four’s speech and was pronounced as [ˈnʌtɪn] (with alveolar plosive [t] and alveolar nasal [n]) in “*so that nothing gets missing in it*” (see Appendix 7). But this did not cause intelligibility problems for listeners as they all found the word intelligible. (2) All the time the Nigerian speakers in my study used an alveolar nasal [n] for velar [ŋ] in “things”, “everything”, “something”, “going”, “missing”, “housing”, “getting”, these variations did not hamper their intelligibility. This finding contrasts with Jenkins (2000), who included velar nasal [ŋ] as part of the features that are critical for maintaining intelligibility in her Lingua Franca Core. (3) The Nigerian speakers in my study most of the time pronounced the voiced dental fricative [θ] with an alveolar plosive [t]. This could be because Yoruba language (the speakers’ L1) and most Nigerian languages lack the dental fricative /θ/ (Eka, 1985; Odumuh 1987; Banjo, 1971; Jibril, 1982; 1986; Jowitt, 1991; Simo Bobda, 1995; 2007; Udofot, 2007; Adetugbo, 2009). For example, “things” was realised as [tins], “everything” as [ˈevritɪn], “somethings” as [ˈsʌmtɪnz], “thought” as [tɔːt], “think” as [tɪnk], “growth” as [grəʊt] (see Appendix 9).

But these usages did not hamper intelligibility in my study. This result echoes the research result of Deterding (2013) and Jenkins (2000; 2000; 2006). The reason why this intelligibility was not affected can partly be explained by the fact that in reality, some native speakers also do not use these sounds /θ ð /, as many

in London use [f, v] instead (Wells, 1982: 328) while some in Ireland and New York City use [t, d] (or dental stops) (Wells, 1982: 429, 515). When dental fricatives are “replaced”, a wide range of sounds may occur instead. Not only are [f, v] used by some native speakers and [t, d] by others, but [f, v] are also used by speakers from Hong Kong (Hung, 2000), [t, d] occur throughout Association of South East Asian Nations (ASEAN) (Deterding and Kirkpatrick, 2006), African English (Atechi 2004), and [s, z] may also occur with speakers of English from many different countries including Germany (Swan, 1987) and China (Chang, 1987; Ho, 2003). So, in token 3, it is highly likely that this breakdown arises from the use of an open-mid back vowel [ɔ] on the first syllable and not the use of variant [t] and an alveolar nasal [n].

In Token 7, speaker one pronounced /mʌst/ as [mɔs] in “I must go on vacation, it is important”. In this token, the vowel [ɔ] was used and in addition, there was an elision of the word-final [t]. The pronunciation of the word led to 29 instances of intelligibility failure. A further breakdown shows that the 29 intelligibility problems were made up as follows:

	Listeners’ responses	NOL	ORP	ORA	SA	CA	SC	NR
1	I *?????* go on vacation, it's important	17 listeners						✓
2	I *would* go on vacation, it's important	2 listeners			✓		✓	
3	I *may* go on vacation, it's important	1 listener			✓		✓	
4	I *may have* to go on vacation, it's important	1 listener			✓		✓	
5	I *will* go on vacation, it's important	1 listener			✓	✓	✓	
6	I *should* go on vacation, it's important	7 listeners			✓	✓	✓	

From the listeners' transcriptions, 17 listeners could not decipher "must" as they did not write anything for the word while other listeners (12) resorted to different realisations which seem to show that they did not understand the pronunciation. It is quite possible that these twelve listeners have used semantic cues to figure out what they heard. They may feel that they need to fill the blank or slot with an auxiliary verb to fit the context of the sentence. The issue here is undoubtedly the result of the alternatives to the referent sound [ʌ] rather than the elision of the word-final [t] since the latter was not found to reduce intelligibility elsewhere in my data. This could be because it is a very common feature of English phonology (Cruttenden, 2008). For example, speaker one pronounced "rest" as [res] on four occasions, "just" as [dʒʌs] on two occasions but this pronunciation did not affect intelligibility. Other example of elision in my study include "must" pronounced as [mʌs] in speaker two's excerpt.

In Token 8, speaker one pronounced the word "Sundays" as [sɔ̃ndiz] in the phrase "…I must go on vacation, it is important and my Sundays, I have to rest…" (See Appendix 7). In this token, the nasalised open-mid back vowel [ɔ̃] was used. This pronunciation of the word "Sunday" ([sɔ̃ndiz] caused intelligibility breakdown for 30 listeners who failed to respond by not writing anything for the word.

However, seventy listeners identified the target word "Sundays". One possible explanation for this could be the role context played. 70 listeners who understood the word appeared to have resorted to their previous background knowledge and made a guess based on the context in which the word occurred (Kennedy and Trofimovich, 2008). The speaker, in the earlier part of her speech, mentioned that

she loves her job so much and that if she is not resting; she is working and even works during rest time. This background information or circumstances in which the utterance was produced may have given the listeners contextual clues in interpreting the word.

The second possibility is that the interpretability of what precedes and follows the word in question is an important factor in determining the intelligibility of the word. I consider that the fact that all the listeners heard the pronoun “my”, which precedes the word “Sundays”, and the phrase “I have to rest”, which follows the word in question, contributed to the intelligibility of the word “Sundays”. In other words, the fact that they understood “I have to rest” seems to have helped them work out their new experience, *Sundays,* within the frame of “rest” (Lieberman, 1963; Wang 1987; Hardman, 2010). Therefore, the word *Sundays* appears likely because it is the day of the week when some people in many countries rest from work. This explains why the listeners may have understood the word despite the pronunciation by the speaker.

In Token 64, Speaker six is talking about a newly formed Nigerian political party, which he launched to provide a platform for people of flawless character who have withdrawn from the Nigerian political arena due to corruption. In his speech, he called on people of like minds to register as members of the party that will provide an alternative for what he described as a corrupt and morally bankrupt system. He says:

> *Extract 6.12*
> *Context*: /… there are many voiceless people in Nigeria/ and sometimes even when they have a voice, / when they have a

> platform/for the expression of their voice, /they find they cannot really relate/ to any of the existing political parties. /this is especially so /of a very idealistic youth / hmm who feel that there is no point trying to **buck** [bɒk] the system" … / (Speaker six, unit 15-19).

Here, the speaker pronounced the idiom "buck the system" as [bɒk ðə ˈsɪs təm]. We can see that in this phrase, the vowel in the word "buck" is pronounced with an open back vowel [ɒ]. This pronunciation may have caused intelligibility breakdown for 50 listeners who responded as follows:

	Listeners' responses	NOL	ORP	ORA	SA	CA	SC	NR
1	who feel that there is no point trying to*????* the system	15 listeners						✓
2	who feel that there is no point trying to *back* the system	17 listeners	✓		✓		✓	
3	who feel that there is no point trying to *block* the system	5 listeners	✓		✓		✓	
4	who feel that there is no point to *bock* the system	10 listeners	✓					
5	who feel that no point to *bog* the system	1 listener	✓					
6	who feel that there is no point to ~~bog~~ *boke* the system	1 listener	✓					
7	who feel that there is no point to *bop* the system	1 listener	✓					

As shown in the transcriptions above, 15 listeners did not write down anything for the word, suggesting that they did not understand the pronunciation of the word. 17 listeners[98] were unable to identify the word *buck* hearing it as "back" which suggests that they heard the vowel quality in *buck* as front vowel [æ]. Five listeners[99] heard *buck* as "block" [ˈblɒk] which suggests that these listeners recognised some of the phonetic cues they heard and made a guess that seems

[98] (5 British, 2 Ghanaian, 3 Spanish, 2 Malawians, 1 Iranian, 1 American, 1 German, 1 Greek, and 1 Italian)
[99] (1 British, 1 Romanian, 1 Italian, 1 Thai and 1 German)

to fit the context. Ten listeners[100] heard *buck* as "bock" which demonstrates that their attention was primarily focused on the pronunciation of [ɒ] and this probably is the main issue that caused intelligibility breakdown. The remaining three listeners[101] wrote "bog", "boke" and "bop" respectively which suggest the vowel quality used by the speaker is the cause of intelligibility breakdown. Overall, the fact that all the listeners who failed to understand or who misunderstood *buck* were confused by the vowel quality led to the conclusion that the use of [ɒ] was the major cause of unintelligibility. It is also possible that the use of the idiomatic phrase to *buck the system*[102] is not familiar to listeners. This may have contributed to these listeners being unable to guess the target word correctly.

As we have seen above in this section, I have discussed several simple tokens where alternatives to the open mid-central vowel [ʌ] were the only noticeable cause of the intelligibility breakdown. I will now consider complicated cases (tokens 11, 23, 30, 48 and 50). In Token 11, "***money***" /ˈmʌni/ was pronounced as [mɔni] with a back vowel [ɔ] in the first syllable. The pronunciation of the word caused intelligibility problems for 38 listeners. The following table presents the details of these responses:

	Listeners' responses	NOL	ORP	ORA	SA	CA	SC	NR
1	Don't let ?????, *?????* fame get into your head	5 listeners						✓
2	Don't let power, *?????*, ????? get into your head	2 listeners						✓
3	Don't let ?????, *?????*, ???? get into your head.	5 listeners						✓

[100] (2 British, 2 French, 1 Chinese, 2 Austrian, 1 Indian, 1 Greek and 1 Norwegian)
[101] (Spanish, Russian and British participants)
[102] The phrase is defined by Cambridge Dictionary (2016) as "to fight against the usual way of doing something".

4	Don't let power, ~~*morning*~~, fame get into your head	1 listener	✓					
5	Don't let how, *many*, things get into your head?	3 listeners		✓			✓	
6	Don't let ?????, *many*, fame get into your head	10 listeners		✓				
7	Don't let harmony, fame get into your head	12 listeners	✓					

Examining the data, 12 listeners left a blank slot for "money" suggesting that the word was unintelligible to them. The responses of all the listeners who misunderstood the word reveal that they were most likely confused by the quality of the vowel [ɔ] used by the speaker in the first syllable. However, in this case, one needs to consider the context and the sequence in which the word appeared which is shown in the following extract:

> *Extract 6.13:*
> Context: …Just be yourself, be original/don't let *power, **money**, fame* get into your head/just be you/whoever you are, keep your head straight/humility really matters, you have to be humble (Speaker one, unit 21-25).

In this extract, power, money, fame was pronounced as [ˈpɑːmɔni fem]. Here one can observe that the second syllable in "power" is missing and the vowel in the first syllable of "money" is produced with a back vowel [ɔ]. This may explain the reason 12 listeners heard "power, money" as "harmony" (phonetically transcribed as [ˈhɑːməni]). Even though the word "harmony" does not fit the context in which the word was made, and it is not syntactically correct in this context, the listeners have put down what they heard. Listeners' response such as "harmony" may be an indication that the pronunciation of the preceding word (power) as [ˈpɑː] is overlapping with the pronunciation of "money" [mɔni] (see section 6.3 for more details). Apart from the listeners who heard "power, money" as "harmony", a

critical look at other listeners' responses shows that 23 were unable to understand the earlier word as "power". We could say that this has had an influence on the failure of the listeners to understand "money". However, the phonetic feature of the word "money" itself that contributes to it being misunderstood seems to be the alternative realisation to the referent sound [ʌ].

One might note that apart from the words "other", "nothing" must", "money", and "Sundays" discussed above, there were four words in speaker one's speech in which the [ʌ] central vowel was used according to the referent accent (RP) and were correctly transcribed by the listeners. These words are "worried", "love", "much" and "humble". The following extract shows the wider context in which these words appeared:

> *Extract 6.14:*
> *Context*: I am not **worried** [ˈwʌrid] because I'm an actress. / I should be able to play any role/, and I'm supposed to be versatile as an actress. /So, playing Jennifer and playing other [ɔðə] roles/ has nothing [ˈnɔtɪŋ] to do with my person. /Well, I **love** [lʌv] my job so **much**/mʌtʃ/…/Marriage has really changed a lot of things, /I must [mɔs] go on vacation, it is important /and my Sundays [sɔ̃ndiz], I have to rest. …don't let power**,** money [ˈmɔni], fame get into your head. …humility really matters, you have to be **humble**/ˈhʌmbʊ (Speaker one, unit 1-20).

However, when [ɔ] was pronounced intelligibility failure occurred in Speaker one's speech.

Let us consider more examples (see table 6.4) that support the observations made so far. In Token 23, speaker two said "among" [əˈmɔŋ], which 25 listeners found problematic, possibly due to the use of the back vowel [ɔ] at the second

syllable of “among” in the phrase “that should take place among nations” (Speaker two, unit 17). The examples below give the listeners’ interpretations:

	Listeners’ responses	NOL	ORP	ORA	SA	CA	SC	NR
1	that should take place *a?????* nations	21 listeners		✓				
2	that should take place *abominations*	1 listener	✓					
3	that should take place on *our missions*	1 listener	✓				✓	
4	that should take place *on nations*	2 listeners	✓				✓	

As shown in the responses above, all the listeners could interpret the first part of the utterance “that should take place”, but this did not support their understanding of the word “among”. The use of [ɔ] is assumed to be the phonological factor that causes the word to be misunderstood because 21 listeners recognised the first syllable in “among” but did not understand the second syllable. In example (2), (3) and (4), four listeners’ responses suggest that they focused their attention on the back vowel. However, It is also worth noting that “among nations” was said quite fast. In fact, the eight syllables in the clause “that should take place among nations” [ðœt ʃud te:k ple:s əmɔŋ neɪʃᵊnz] took just 2 seconds in total. The first part of this utterance “that should take place” (4 syllables) took a total of 1.25 seconds while “among nations” (4 syllables) took a total of 0.7 seconds. This may explain why the first part was understood. It is important to note that this utterance was made towards the end of the speaker’s speech. So, it may also well be that fatigue or speaking rate contributed to the intelligibility breakdown.

It should be noted that with the exception of the word “among”, there were seven instances in speaker two’s speech in which half-open central vowel [ʌ] were used according to the referent accent. The extract below gives the wider context in which these instances appeared.

> *Extract 6.15:*
> *Context: /*…and eh presuming that **others** [ɔðəz]cannot quite attain/ that moral height em or even **cultural** [ˈkʌl tʃʳ ᵊl] em universalism. …**just** [dʒʌst]/when you say you are not giving offence, /do you really understand to how many millions/ you are in effect giving offence…. In other words, when we talk about **culture** [ˈkʌl tʃəˈ] for instance/em em em **Cultural** [ˈkʌl tʃʳ ᵊl] dialogue we don’t ask ourselves, / Is this a kind of exterior directed dialogue…that should take place among [əˈmɔŋ] nations. /In other words, whose **culture** [ˈkʌl tʃəˈ] is it really /and who defines the **culture**? [ˈkʌl tʃəˈ] (See Appendix 7)

In this extract, speaker two pronounced the vowel in “just” and the first syllable of “others”, “culture” and “cultural” with the [ʌ] central vowel. The three occurrences of “culture”, “cultural”, “just” and “others” were completely intelligible to all listeners as they all identified the words correctly. However, when [ɔ] was pronounced in the second syllable of “among”, intelligibility failure occurred.

In Token 30, speaker three pronounced “must be” [mʌst bi:] as [mɔ bi:] in “we need that our laws and rules must be respected”. The vowel quality [ɔ] was used in the word “must” while the cluster [st] was not pronounced. This pronunciation caused intelligibility failure for 48 listeners who responded as follows:

	Listeners' responses	NOL	ORP	ORA	SA	CA	SC	NR
1	We need that our laws and rules *are* respected	8 listeners			✓	✓	✓	
2	We need that our laws and rules???? be respected	21 listeners						✓
3	We need that our laws and rules *will* be respected	5 listeners			✓	✓	✓	
4	We need that our laws and rules *may* be respected	1 listener			✓		✓	
5	We need that our laws and rules *should* be respected	3 listeners			✓	✓	✓	
6	We need that our laws and rules *more* be respected	3 listeners	✓					
7	We need that our laws and rules ~~*more*~~ be respected	7 listeners	✓					

From the responses, the fact that majority of listeners who failed to understand the phrase "must be", recognised "be" may suggest that the problem lies in the pronunciation of the word "must". It could be that the listeners did not understand the pronunciation of "must" and hence they have used semantic cues or information available in the sentence to work out what they heard. This may explain the reason why some listeners have filled the blank space with an auxiliary verb (See example 1, 3, 4 and 5 in the table above). A critical look at response such as "more" (see example 6) demonstrates that listeners have orthographically represented the sound [ɔ] used by the speaker and did not recognise the consonant clusters. It is also interesting that some listeners (in example 7) have orthographically represented the sound used by the speaker but cannot match what they heard to the context. This may explain the reason why they cancelled the word "more". All these findings show that the issue here is the result of the alternatives to the referent sound [ʌ] although the consonant cluster in the coda of the word "must" may be a contributory factor.

In Token 48, Speaker five, the governor of the largest state in Nigeria, talked about his previous achievements and the prospects his government has for the upcoming year. He said "budgeting" /ˈbʌdʒɪtɪŋ/ as [bɔˈdʒɛtɪŋ] in the phrase "of budgeting in a constitutional democracy". The vowel in the initial syllable is pronounced with a back vowel [ɔ] while there is a different stress pattern which is traceable to the speaker's L1. The word "budgeting" ([bɔˈdʒɛtɪŋ] as pronounced by the speaker) was problematic for 43 listeners. Before discussing these listeners' interpretation of the word, the wider context in which "budgeting" was misunderstood is shown below:

> *Extract 6.16.*
> *Context:* /…Well, I think that the biggest achievement for 2012/ has been our ability to consolidate on the gains/that we have made in the past/ to deepen access of our people to services, /road networks, health care, education, opportunities for jobs /and to continue to reinforce the importance /of **budgeting** [bɔˈdʒɛtɪŋ] in a constitutional democracy/… (Speaker five, unit 1-7)

	Listeners' responses	NOL	ORP	ORA	SA	CA	SC	NR
1	of ???????? in a constitutional democracy	33 listeners						✓
2	of *voting* in a constitutional democracy	2 listeners		✓	✓		✓	
3	of *bureaucracy* in a constitutional democracy	1 listener						
4	of *projecting* in a constitutional democracy	6 listeners	✓					
5	of *the people* in a constitutional democracy	1 listener			✓		✓	

As shown in (1) of the above transcriptions, 33 listeners did not identify *budgeting* as they failed to provide any word on their sheets. In (2) and (3), two listener

participants[103] wrote “voting” while a participant[104] wrote “bureaucracy”. These responses suggest that they did not understand the pronunciation of “budgeting”. And thus, they appeared to have made guesses that fit the frame of “government”. In (4), six listeners[105] interpreted *budgeting* as “projecting”, which suggests that these listeners heard the last two syllables but misunderstood the first syllable possibly due to the vowel quality used by the speaker and the stress difference.

In general, what can be inferred from all the 43 listeners’ responses is that the context in which “budgeting” occurred probably did not provide sufficient information for the listeners to make sense of the word. Therefore, on this occasion, it appears that they are relying on the sounds in order to process the word. Under this situation, the initial vowel, and the stress pattern used by the speaker caused the lack of intelligibility.

Finally, in Token 50, speaker five pronounced “agriculture” as [ˈa:grɪkɔ:tʃər]. The vowel in the third syllable was realised by a mid-open back vowel [ɔ:]. In addition to this, there was no [l] (see section 6.1.7). The word was problematic to 31 listeners. Before considering the listeners’ realisations of the word, the wider context for Token 50, in which “agriculture” was misunderstood is shown below:

> *Extract: 6.17*
> *Context*: Yeah, our decision to focus on power, /**agriculture**, transportation, and housing/was in response to the feedback we were getting, / the compelling needs to create jobs/ beyond banking and telecoms (Speaker five, unit 9-13)

[103] (2 British listeners)
[104] (1 British listener)
[105] (5 British, 1 French)

	Listeners' responses	NOL	ORP	ORA	SA	CA	SC	NR
1	*?????* transportation and housing	16 listeners						✓
2	*are on*, transportation and housing	1 listener		✓				
3	*our record*, transportation and housing	12 listeners[106]	✓					
4	*nature*, transportation and housing	1 listener		✓				
5	~~*angry*~~ *record*, transportation and housing	1 listener	✓					

Sixteen listeners[107] did not attempt to guess the word and did not write anything for it. In this case, it is difficult to suggest the reason for not attempting the word. For those who did respond, some of their responses show that they heard the back vowel [ɔ]. For example, in (3) and (5), responses such as "our record" and "record" may indicate that their attention was primarily focused on the [ɔ:] used by the speaker in the third syllable of "agriculture". It also reveals that the lateral sound [l] is not pronounced. So, what is causing the major intelligibility breakdown? The back vowel [ɔ:] used in the third syllable of "agriculture" could be the cause of the intelligibility breakdown and the non-realisation of [l] may be a contributory factor.

However, sixty-nine (69) listeners heard *agriculture* correctly. It is quite possible that they resorted to their previous background knowledge and made a personal

[106] (1 Thai, 1 Austrian, 2 Russian, 1 Norwegian, 4 British, and 3 Spanish)
[107] (2 Spanish, 3 British, 2 Chinese, 2 Norwegian, 1 American, 1 South Korean, 1 Italian, 1 polish, 1 Brazilian, 2 Indians)

guess based on the context and greater familiarity with the speaker's accent in this exercise.

In summary, there were ten tokens (2, 3,7,8,11,23, 30, 48, 50 and 64) where alternatives to [ʌ] may have caused or contributed to an intelligibility breakdown. In five of these tokens (2, 3, 7, 8 and 64), the vowel variant used seems to have been the sole phonological factor that caused the word to be misunderstood. For example, in Token 2, the use of [ɔ] in the first syllable of "other" caused problems for 32 listeners. In Token 3, the use of [ɔ] in the first syllable of "nothing" caused problems for 65 listeners. However, it must be noted that [θ] in the coda of the first syllable and velar nasal [ŋ] in the onset of the second syllable was pronounced as [t] and [n] respectively but were not found to reduce intelligibility elsewhere in my data. In Token 7, the vowel variant used in "must" caused problems for 29 listeners. However, it must be noted that [t] was elided but was not found to cause problems elsewhere in my study. Thus, it appears that the alternatives realisation of the referent sound [ʌ] was the cause of intelligibility breakdown.

In the remaining five tokens (11, 23, 30, 48 and 50), some other factors seem to have contributed to the intelligibility problem. For instance, the sequence in which the words "power, money, fame" appeared may have contributed to listeners inability to understand "money" in Token 11. In addition, this pronunciation of the word "power" as [pa:] could have contributed to the intelligibility breakdown. In Token 23, "among nations" was said quite fast. In addition to that, it was said towards the end of the speaker's speech. Thus, it is possible that fatigue or

speaking rate contributed to the intelligibility breakdown. In Token 30, the non-use of [st] in “must”; in Token 48, the stress difference in “budgeting”; and in Token 50, the non-use of [l] in “agriculture” seemed to have played a part in the intelligibility breakdown.

In conclusion, there appears to be a lot of factors in five of the ten tokens that caused intelligibility breakdown due to the alternatives to the reference accent [ʌ]. But, as discussed, in Tokens 2, 3, 7, 8, and 64, the vowel variant used was the only attributable factor. Based on these findings, I suggest that the vowel variant used in Tokens 11, 23, 30, 48 and 50 was a major contributory factor in the breakdown.

The following section will consider a vowel which could also be classified as a central vowel.

6.1.4. The Short Lax (lowered front centralized) Vowel [ɪ]

In the present study, there is a total of eight tokens in which a less familiar pronunciation of the referent sound [ɪ] may have contributed to instances of intelligibility breakdown. These eight tokens of intelligibility breakdown are shown in Table 6.5.

Table: 6.5. Intelligibility breakdown involving [ɪ] vowel

Token no	**Speaker**	**Word**	**Pronunciation**	**Instances of Breakdown**
6	One	marriage	[mæˈre:dʒ]	41
24	Three	establish	[eˈstablɪʃ]	30
53	Five	enabling	[eˈneɪblɪŋ]	34
60	Six	enlargement	[enˈlɑ:dʒmənt]	79
31	Three	respected	[riˈspektɪd]	31
57	Five	skilled	[ski:d]	46
58	Five	skilled	[ski:d]	32
59	Five	living	[ˈli:vɪŋ]	60

I begin this section by considering cases where alternatives to [ɪ] were the only apparent issue that caused the intelligibility breakdown. Thereafter, I will discuss complex cases where there appeared to be an accumulation of problems that may have caused the breakdown.

In Token 60, Speaker five pronounced “and enlargement” as [ən enˈlɑ:dʒ mənt] in the following extract .

> *Extract 6.18*
> *Context*: The first thing is that I hate titles/I really do/and then err when such a title err carries with it err, / a weight of imposition, sense of additional duties; /**and enlargement** [ən enˈlɑ:dʒ mənt] of one’s constituency… (Speaker six, unit 1-5)

The vowel in the initial syllable of “enlargement” (/ɪ/ for the reference accent) was pronounced with [e] (Cardinal 2)[108]. The pronunciation of the word caused intelligibility problems for 79 listeners who responded as follows:

	Listeners’ responses	NOL	ORP	ORA	SA	CA	SC	NR
1	*an???????* of one’s constituency	55 listeners						✓
2	*alignment* of one’s (constituency)	13 listeners		✓				
3	*a lightment* of one’s constituency	9 listeners		✓				
4	*lightweight* of one’s constituency	1 listener		✓				
5	*light* of one’s constituency	1 listener		✓				

As shown above, 55 listeners did not write anything down for the word “enlargement”. 13 listeners heard “alignment” while nine wrote “a lightment”. Both responses suggest they recognised the first vowel sound [ə] of the previous word “and” but missed the first syllable of “enlargement”. Their transcriptions also reveal that they recognised the last syllable (-ment) and part of the sounds in the second syllable. This suggests that the last syllables were not a problem. A critical look at the remaining syllable shows that the cause of intelligibility breakdown may be the use of [e] cardinal two. This is because all the listeners who misunderstood “enlargement” could not decode the entire first syllable [en].

[108] In many texts, a short vowel [e] is used for a cardinal 3 type vowel but in this current study, the phonetic symbol is used for cardinal two type vowel. A cardinal 3 variant for “enlargement” would not cause any issues here.

In Token 24, Speaker three pronounced “establish” /ɪˈstæblɪʃ/ as [eˈstablɪʃ] in the following extract:

> *Extract 6.19.*
> *Context*: hmm I was the first or one of the first/if not the first as an African leader/who err **establish** [eˈstablɪʃ] strategic partnership with hmm China/… (Speaker three, unit 1-3)

The vowel in the initial syllable of the word “establish” was realised by the vowel [e] (cardinal two). The pronunciation of the word led to 30 instances of unintelligibility. A further breakdown reveals the following:

	Listeners’ responses	NOL	ORP	ORA	SA	CA	SC	NR
1	who *tablish* strategic partnership with China	1 listener		✓				
2	who *publish* strategic partnership with China	3 listeners		✓			✓	
3	who???????? strategic partnership with China	26 listeners						✓

In (1) of the transcriptions above, a listener interpreted establish as “tablish”. Here, the first syllable was not recognised while the second and third were. This suggests it is the vowel quality used in the initial syllable that was the cause of the intelligibility problem. In (2), three listeners[109] wrote “publish”, which indicates that the first syllable and not the last, was a problem for these two listeners. In (3), 26 listeners found the word unintelligible as they did not transcribe it. It is likely that they cannot relate what they heard with the context.

[109] (1Spanish and 1 British, 1 Norwegian)

Speaker three's talk provides another example, which further supports the observations made so far. In Token 31, speaker three pronounced "respected" /rɪˈspek tɪd/ as [riˈspek tɪd] in the phrase "we need that our laws and rules must be respected". This pronunciation caused intelligibility failure for 31 listeners. Of the 31 listeners, 14 did not write anything for the word, while 17 listeners wrote "*suspended*". This response shows that these listeners heard a different vowel quality on the first syllable. So, the vowel variant used by the speaker is probably the cause of the breakdown.

So far, I have considered clear cases where alternatives to [ɪ] were the sole cause of the intelligibility breakdown. I now move to discuss complex cases (6, 53, 57, 58, and 59) where multiple factors seem to have contributed to the breakdown. In Token 6, Speaker one pronounced "marriage" [ˈmærɪdʒ] as [mæˈre:dʒ] in the phrase "marriage has really changed a lot of things". Here, the vowel in the second syllable was pronounced with a front vowel [e:] (Cardinal 2). In addition to this, a different stress pattern which is traceable to the L1 of the speaker was used. The pronunciation of the word caused intelligibility problems for 41 listeners who responded as follows:

	Listeners' responses	NOL	ORP	ORA	SA	CA	SC	NR
1	*My agent* has really changed a lot of things	1 listener	✓					
2	*My age (???)* really changed a lot of things	14 listeners[110]	✓					
3	*My reader has* really changed a lot of things	5 listeners		✓	✓		✓	
4	*My??????* has really changed a lot of things	21 listeners		✓				

[110] (1 Chinese, 1 Korean, 2 Americans 1 Greek and 9 British)

A critical look at the result reveals that all the listeners who misunderstood the word “marriage” heard the first syllable while the result also indicates that many listeners have orthographically represented the sound [e:] used by the speaker in the second syllable of “marriage”. For example, in (1) and (2), listeners’ responses such as “my age” and “my agent” (phonetically transcribed as [maɪ ˈeɪdʒ] or [maɪ ˈe:dʒ] and [maɪ ˈeɪdʒənt] or [maɪ ˈe:dʒənt])[111] may demonstrate that the vowel variant [e:] used by the speaker in the second syllable of “marriage” is the problem. The difference in stress placement could also be a contributory factor. This is because these responses suggest that the stress is placed on the second syllable.

In (3), five other listeners interpreted “marriage” as “my readers”. This may suggest that they heard the initial syllable of “marriage” but misunderstood the second. Their transcription shows a different vowel quality [i:], which may further indicate that the vowel variant used by the speaker is the cause of the problem. It is also quite possible that these five listeners may have used syntactic knowledge or cues to work out what they perceived. “My reader” in that sentence makes sense syntactically but does not fit the context in which the word was made. In (4) above, 21 listeners interpreted “marriage” as “my????”, which may suggest that the listeners heard the first syllable of the word, but completely missed the second syllable.

[111] The use of pure long vowels that might be represented as [e:] and [o:] instead of diphthong /eɪ/ and /əʊ/ is quite widespread throughout the world (Deterding & Kirkpatrick 2006)

In general, the listeners' responses suggest that the cause of intelligibility breakdown could be the use of the vowel variant [e:] on the second syllable although the difference in stress patterns may have interacted with the vowel quality to cause the breakdown. On the other hand, 59 listeners interpreted "marriage" pronounced as [mæˈre:dʒ] correctly. It is quite likely that some of these listeners utilized the contextual information in the speech.

In Token 53 (see Table 6.5), speaker five pronounced "enabling" [ɪˈneɪblɪŋ] as [eˈneɪblɪŋ] in the phrase "but they were independently enabling". The vowel in the first syllable of "enabling" was pronounced with [e]. This seems to have caused problems for 34 listeners. I have provided the wider context in which "enabling" was produced:

> *Extract:6.20.*
> *Context*: ….Yeah, our decision to focus on power/agriculture, transportation, and housing/ was in response to the feedback we were getting/the compelling needs to create jobs/beyond banking and telecoms/and we thought that/those sectors were not only interdependent/but they were independently **enabling** [ˈeneɪblɪŋ]/ (Speaker five, unit 9-16).

	Listeners' responses	NOL	ORP	ORA	SA	CA	SC	NR
1	but they were independently*????????*	22 listeners						✓
2	but they were independently *nebby*	1 listener		✓				
3	but they were independently *...nably*	3 listeners		✓				
4	but they were independently *neighbourly*	6 listeners		✓				
5	but they were independently naybey	2 listeners		✓				

As shown above, most of the listeners (22)[112] did not understand “enabling” as they found it unintelligible while others (12 listeners), who misunderstood the word came up with different suggestions such as “nebby”, “nably”, “neighbourly”, and “naybey” which did not make sense nor fit the context of the utterance. Their responses reveal that they recognised the last two syllables of “enabling” [neɪblɪŋ], which may indicate that the last two syllables posed no challenges whatsoever. A critical look at the responses reveals that the first syllable is missing. This could imply that the vowel quality [e] used in the first syllable was the cause of the problem.

Apart from the vowel quality used in the first syllable of “enabling”, the context in which the word occurred may be a difficult one. It is quite likely that the listeners did not have enough contextual information to understand the target word “enabling”. Hence, the listeners’ inability to understand “enabling” seems to be a combination of pronunciation (the use of front vowel [e] in the first syllable) and context.

In Token 57, 58 and 59 (see Table 6.5), speaker five pronounced the vowel quality in “skilled” (two occurrences) and the first syllable of “living” as long tense vowel [i:]. This pronunciation caused intelligibility failure for listeners. Before analysing these three tokens in detail, the wider context in which they occurred is given in the context below:

> *Extract 6.21.*
> *Context:* …knowledge, education, **skilled** [ski:d] engineers/**skilled** [ski:d] teachers to produce those engineers/and to develop the human/that will deliver all of the services/that will make life

[112] (3 Spanish, 2 Norwegians, 2 British, 2 Polish, 3 Indians, 1 South Korean, 1 Chinese, 1 Nepalese, 1 German, 1 Italian, 1 Iranian, 1 Russian, 1 Romanian and 2 Malawians)

> sustainable and **living** [ˈliːvɪŋ] for our people/are some of the challenges that we are dealing with (Speaker five, unit 23-28).

In this extract, speaker five pronounced the first occurrence of “skilled” [skɪld] as [ski:d]. So, the long tense vowel [i:] is used. In addition to this, there is an absence of [l] in the final consonant cluster (to be discussed in Section 6.1.6). The pronunciation of “skilled” as [ski:d] caused intelligibility failure for 46 listeners who responded as follows:

	Listeners’ responses	NOL	ORP	ORA	SA	CA	SC	NR
1	knowledge, education, ?????? engineers	38 listeners						✓
2	knowledge, education, *skied* engineers	6 listeners	✓					
3	knowledge, education, *ski* engineers	2 listeners	✓					

From the listeners’ responses above, the highest number cannot decipher the word “skilled”. This could be because they cannot match what they heard to the context. These listeners might be wondering what “ski” had to do with the topic. Eight others perceived the quality [i:] of the vowel used by the speaker. This may reveal that the vowel quality caused the word to be misunderstood. However, it must be noted that the listeners’ responses also indicate that the length of the vowel (as discussed in Section 6.1.5) and the non-use of dark-l (to be discussed in Section 6.2.1) are contributory factors to the intelligibility breakdown. The non-realisation of dark-l in “skilled” resulted in another word, i.e. “ski” that does not fit the context (see Section 6.1.5 and 6.2.2). Furthermore, the word “skilled” pronounced as [ski:d] recurred the second time during speaker five’s speech (as

shown in extract 6.21). This caused intelligibility failure for 32 listeners who responded as follows:

	Listeners' responses	NOL	ORP	ORA	SA	CA	SC	NR
1	*?????* teachers to produce those engineers	17 listeners						✓
2	*key* teachers to produce those engineers	14 listeners	✓		✓			
3	*ski* teachers to produce those engineers	1 listener	✓					

In (1) of the transcription above, 17 listeners[113] did not respond to speaker five's pronunciation of "skilled" as they found it unintelligible. 14 listeners[114] wrote "key" while a Spanish listener wrote "ski" respectively. Both responses ("key" and "ski") indicate that it is the vowel quality that is implicated in the intelligibility breakdown although the non-realisation of consonant [l] (as discussed in Section 6.2.2) and the vowel length (as discussed in Section 6.1.5) are also involved. In a case such as this, it is hard to separate out vowel quality from vowel length, as [ɪ] differs from [i:] in both quality and length (Cruttenden 2014:113).

In Token 59, Speaker five is discussing the prospect his government has for the people of Lagos State. In doing this, he pronounced *living* [ˈlɪvɪŋ] as [ˈli:vɪŋ] in the phrase "…*that will make life sustainable and living for our people*". The vowel variant [i:] was used. This word was problematic for 60 listeners who came up with different realisations of it.

[113] (10 British, 3 Spanish, 1 Nepalese, 1 Chinese, 1 French and 1 Norwegian)
[114] (9 British, 4 Americans, 1 Norwegian)

	Listeners' responses	NOL	ORP	ORA	SA	CA	SC	NR
1	that will make life sustainable and *leaving* for our people	9 listeners	✓					
2	that will make life sustainable and *relieving* for our people	2 listeners	✓		✓	✓	✓	
3	that will make life sustainable and *easy* for our people	18 listeners	✓		✓	✓	✓	
4	that will make life sustainable and????? for our people	31 listeners						✓

As shown in the transcriptions above, it is the vowel quality and its length that seems to have caused the intelligibility breakdown. This is because most of the listeners' responses show that people heard close long tense vowel [i:] not short lax [ɪ]. For example, in (1), nine listeners[115] heard *living* as "leaving" [ˈli:vɪŋ] which suggests that the vowel quality and length are responsible for the intelligibility breakdown for these listeners. This finding concurs with the observation of Cruz (2003) where native English listeners were unable to understand speakers from Brazil who pronounced the initial vowel in "living" with [i:]. In (2), two listeners[116] heard *living* as "relieving" [rɪˈli:vɪŋ] which shows that the listener perceived the quality [i:] and this caused the intelligibility breakdown. In (3), eighteen listeners perceived the word as "easy" [ˈi:zi] which reveals that they heard the close front vowel quality [i:] used by the speaker in the first syllable instead of [ɪ].

[115] (1 South African, 2 Indians, 1 Polish, 1 Iranian, 1German and 3 British)
[116] (1British and 1 South Korean)

In (4), thirty-one listeners left a blank slot for the word. This implies that the listeners did not understand the word as pronounced by speaker five. The 31 listeners interpreted the utterance speaker five said to mean "…that will make life sustainable and (???????) for our people". I perceive that what the listeners heard is literally "*leaving" [ˈli: vɪŋ] for our people"* and since this does not make sense in this context or fit the context of the utterance, the listeners left the slot for the word blank. This is an example of intelligibility breakdown due to a different vowel quality (Cruz 2003; Deterding and Mohamad 2016) although the length of the vowel is also likely to be a major contributory factor (Jenkins, 2002; Deterding and Mohamad 2016).

In summary, there were eight cases (Tokens 6,24, 53, 60, 31, 57, 58 and 59) in which alternatives to short lowered front centralised vowel [ɪ] may have caused a communication problem or contributed to an intelligibility breakdown. In three of these tokens, (24, 60 and 31), the alternatives to [ɪ] vowel appears to be the only factor that caused the intelligibility breakdown: for example, in Token 24, the use of the vowel variant [e] in the first syllable of "establish" was problematic for 30 listeners. In Token 60, the use of [e] in the first syllable of "enlargement" caused problems for 79 listeners. In Token, 31, the use of [i] in the first syllable of "respected" caused intelligibility breakdown for 31 listeners.

In the remaining five tokens (Tokens 6, 53, 57, 58 and 59), some other factors seem to have contributed to the problem. For instance, in Token 6, the stress placement in "marriage" seems to be an additional issue. In Token 53, the context in which the word "enabling" occurred may be a difficult one. In Token 59, the

length of the vowel used in “living” may have interacted with the vowel quality to cause the breakdown. In Token 57 and 58, the length of the vowel and non-realisation of [l] seems to have played a part in the breakdown. However, in Tokens 24, 60 and 31, it seems clear that it was only the vowel variant used that was the sole factor. Therefore, I suggest that the vowel variant used in Tokens 6, 57, 58 and 59 was a major contributory factor in the cause of the breakdown. In the following section, I will consider the intelligibility problems that occurred because of the length of a vowel.

6.1.5. Vowel Length

Vowel quantity is concerned with relative length, and it is reasonably stable across varieties of English (Jenkins, 2000; Zoghbor, 2010). Dalton and Seidlhofer (1994b); Jenkins, (2000; 2002) and Neal'O (2015) suggest that vowel length is important, particularly the distinction between long and short vowels but also the difference in duration that signals the contrast between voiced and voiceless final consonants. For example, the vowel in *bid* is longer than that in *bit* because the [t] in *bit* shortens the preceding vowel (Roach 2009: 28).

In this present study, there are fourteen tokens in which the length of a monophthong may have contributed substantially to the occurrence of intelligibility breakdown, making it the most common phonological contributory factor. These tokens are shown in Table 6.6.

Table: 6.6. Intelligibility breakdown involving vowel quantity

Token no	**Speaker**	**Word**	**Pronunciation**	**Instances of Breakdown**
1	One	any	[ɛˈni:]	36
4	One	lead	[lid]	41
13	One	keep	[kip]	22
25	Three	strategic	[strəˈtidʒɪk]	28
28	Three	reasonable	[ˈrizᵊnəbʊ]	37
32	Three	reasonable	[ˈrizᵊnəbʊ]	35
47	Five	deepen	[dipɪn]	36
57	Five	skilled	[ski:d]	46
58	Five	skilled	[ski:d]	38
59	Five	living	[ˈli:vɪŋ]	60
19	Two	universalism	[ju:nɪˈvasᵊlɪzᵊm]	64
26	Three	early	[ˈaleɪ]	78
36	Three	certain	[ˈsatɪn]	86
42	Four	introvert	[ˈɪntrəvat]	50

I start this section by discussing what I consider to be straightforward cases. These include Tokens, 4, 13, 28, and 32 where the length of a vowel was the sole cause of the intelligibility breakdown. Thereafter, I move on to discussing complex cases (Tokens 1, 25, 47, 57, 58, 59, 59, 19, 26, 36, and 42) that involved a build-up of problems that caused the intelligibility breakdown.

In Token 4, Speaker one pronounced *lead* [li:d] as [lid] in the phrase "I play the lead character". Here, the short vowel was used, and this seems to have caused an intelligibility breakdown for 41 listeners. The extract shown below gives the wider context in which *lead* was misunderstood and listeners' interpretations of the word:

> *Extract 6.22*
> *Context*: / … I am a producer, am a writer/ all my movies, I write them, and I produce them/and I play the **lead** [lid] the character/ (Speaker 1, unit 9-11).

	Listeners' responses	NOL	ORP	ORA	SA	CA	SC	NR
1	I play the??? character	28 listeners						✓
2	I play the *new* character	1 listener		✓	✓	✓	✓	
3	I play the *lid* character	11 listeners	✓					
4	I play the *lit* character	1 listener	✓					

As shown above, out of the 41 listeners, 28 left the space for the word blank. This could be because they cannot relate what they heard [lid] to the context. These listeners might be thinking that "lid" has nothing to do with the topic discussed. In (2), a listener[117] interpreted *lead* as "new", which may suggest that the listener substituted the word with something she is familiar with. In (3), and (4), the

[117] Listener 55 (Spanish)

listeners' responses indicate that the vowel duration caused the intelligibility breakdown.

The remaining 59 listeners were able to transcribe the word "lead". One explanation for this could be that the linguistic background of listeners had in some way influenced the intelligibility of this word. In other words, listeners who transcribed "lead" correctly recognise that "lead character" collocate, whereas "lid character" is meaningless. They seem to have enough phonological clues to process this. Another reason could be that these listeners are familiar with accents that don't differentiate between the long and short vowel. The third explanation could be that the 59 listeners relied on the context (circumstances in which the utterances were produced) over pronunciation cues. From the context, *lead* would be the obvious word to have in the utterance because the speaker is talking about the role she played in a movie called "Jenifa". So, for these listeners, context seemed to overwrite pronunciation cues. But for the 41 listeners who had problems understanding the word "lead" (pronounced [lid]), the vowel duration was the issue (Jenkins 2000; 2002; Cruz 2003). This is because, despite much contextual information, they were guided by the pronunciation rather than the contextual cue.[118]

In Token 13, Speaker one pronounced *keep* [ki:p] as [kip] in *"…whoever you are, keep your head straight. Humility really matters you have to be humble…*". A

[118] One might note that out of the 41 listeners who misunderstood *lead,* 4 were Norwegians (out of 6), 4 Germans (out of five), 12 British (out of 37) and 4 Americans (out of 5). This could have resulted from the fact that these speakers observe the vowel length distinction in their varieties.

short vowel was used. The pronunciation of the word keep as [kip] caused intelligibility breakdown for 22 listeners who responded as follows:

	Listeners' responses	NOL	ORP	ORA	SA	CA	SC	NR
1	Whoever you are, *?????* your head (straight)	10 listeners						✓
2	Whoever you are, *put* your head straight	1 listener			✓	✓	✓	
3	Whoever you are, *get* your head (straight)	7 listeners			✓	✓	✓	
4	Whoever you are, *kip* your head straight	4 listeners	✓					

From the result shown in the table above, 10 listeners found the word unintelligible. This could be because they cannot relate what they heard to the context. Sometimes the listeners' have orthographically represented the vowel length used by the speaker as observed in example (4). The short duration of vowel produced by the speaker may have been responsible for the breakdown of intelligibility in this instance. In (2) and (3), it is possible that the listeners did not understand the pronunciation of "*keep*" but have chosen words that are semantically appropriate and syntactically correct. They may have used semantic information available in the sentence to work out what they heard.

In Token 28 and 32, speaker three pronounced the word *reasonable* [ˈriːzᵊnəbᵊl] as [ˈrizᵊnəbʊ] on two occasions. This pronunciation caused intelligibility breakdown for listeners. The wider context in which *reasonable* occurred is given in the context below:

Extract 6.23
Context: /…we want to be able/ to have **reasonable** [ˈrizᵊnəbʊ] revenue from our resources. /If you want our resources, / we need that our laws and rules must be respected. / We want infrastructure/ and if you can give us that, / yes, and we will pay for it either directly/ or we will take loan at **reasonable** [ˈrizᵊnəbʊ] interest rate… (Speaker three, unit 10-17)

In this extract, speaker three said "reasonable" two times during his discussion, and each time, a short vowel was used in the first syllable. In addition to the vowel length, the speaker pronounced dark [l] as a close back vowel [ʊ], a process Simo Bobda refers to as "vocalisation" (Simo Bobda 2007; Deterding 2014). The first token of *reasonable* (pronounced as [ˈrizᵊnəbʊ]) caused intelligibility breakdown for 37 listeners who responded as follows:

	Listeners' responses	NOL	ORP	ORA	SA	CA	SC	NR
1	to have?????? revenue from our resources	27 listeners						✓
2	to have *listenable* revenue from our resources	7 listeners	✓					
3	to have *risknable* revenue from our resources	1 listener	✓					
4	to have *risk able* revenue from our resources	2 listeners	✓					

From the findings, 27 listeners[119] did not interpret the word *reasonable*. In (2), seven listeners[120] heard *reasonable* as "listenable" while in (3), a listener[121] heard the word as "risknable". These responses show a different vowel length in the initial syllable. In other words, their responses suggest that it is the duration of

[119] (11 British, 2 Americans, 4 Norwegians, 1 Italian, 4 German, 1 Greek, 1 Korean, 1Spanish, 1 Chinese and 1 Indian)
[120] (5 British, 1 American, and 1 Polish)
[121] (1 Brazilian)

the vowel in the first syllable that caused problems for the listeners. In (4), two listeners[122] heard *reasonable* as “risk able” which demonstrates a short vowel length in the first syllable.

The findings also reveal that apart from the 27 listeners who did not write anything for the word, all the listeners who attempted to guess the word recognised the dark [l] which suggests that the [l] vocalisation was not the cause of the intelligibility breakdown in this case. This may be because it is common in a range of Englishes for dark-l to be pronounced as a close back vowel such as [ʊ] (Wells, 1982:20). This happens especially in many varieties of British accents, South Eastern, and Cockney (Wells, 1994) and it is also found elsewhere in the world, including Inner Circle varieties such as those of New Zealand and Australia (Horvath and Horvath, 2001) as well as Outer Circles such as that of Nigeria (Simo Bobda, 2007) and Singapore (Tan, 2005).

Similar to Token 28, Speaker three in Token 32, repeated the word “reasonable” pronounced as [ˈrizᵊnəbʊ] in the course of his speech. The word was qualifying “interest rate” in the phrase “…or we take loan at reasonable interest rate…”. Even when speaker three used “reasonable” the second time during his speech, the word was still not intelligible to 35 listeners who responded as follows:

	Listeners’ responses	NOL	ORP	ORA	SA	CA	SC	NR
1	or we take loan at????? interest rate	22 listeners						✓
2	or we take loan at ??????????	8 listeners						✓

[122] (2 British listeners)

3	or we take a low *actionable* interest rate	1 listener						
4	or we take loan at his interest rate	3 listeners			✓	✓		
5	or we will take long*?????* transfer	1 listener						✓

My findings reveal that 11 listeners out of the 35 listeners heard the word *reasonable* correctly the first time in one context but did not interpret the word at the second occurrence. 20 listeners out of the 35 listeners did not hear the word *reasonable* in either occurrence. For example, a listener[123] interpreted the first occurrence of *reasonable* as “riskable”, but at the second occurrence of the word, he did not write anything for the word. In (3), a British listener heard *reasonable* at the first occurrence as “risk able”, but at the second occurrence, he interpreted it as “actionable”. This response shows that this listener heard the last syllable which further suggests that the [l] vocalisation was not an issue.

So, what is causing the problem in the two occurrences of the word “reasonable”? Could it be the length of the vowel used by the speaker in the initial syllable, or could it be the vocalisation of [l] as [ʊ] in the final syllable, or a combination of these two? My analysis suggests that the use of a short vowel was the cause of intelligibility problems in the two occurrences of “reasonable”, while the vocalisation of [l] was not an issue. An explanation for this is that [l] vocalisation occurred ten times in this study and in all its occurrences, it was not found to cause intelligibility breakdown for listeners. In addition, many of the listeners who misunderstood “reasonable” identified the final syllable “-able” and

[123] (a Brazilian listener)

orthographically represented the length of vowel (short vowel) used by the speaker.

So far in this section, I have discussed straightforward cases where the length of a vowel was the sole cause of the intelligibility breakdown. I will now consider cases that involve an accumulation of factors that caused the intelligibility breakdown. In Token 1, the vowel /i/ in the second syllable of “any” was longer than the normal duration. It sounded like /i:/, and this did change the stress from the initial syllable to the second syllable of the word in the phrase “I should be able to play any role”. So “any” [ˈɛni] was pronounced [ɛnˈi:] by Speaker one. The pronunciation of the word caused intelligibility problems for 36 listeners who wrote: “I should be able to play a new role”. The listeners’ transcriptions give the first vowel in “any” as stress less “a” and the second part as the adjective “new”. So, this suggests that the stress difference and the vowel length difference caused intelligibility breakdown in this case.

The remaining 64 listeners interpreted the target word correctly in the utterance. One reason for this could be that in the process of interpretation, the listeners employed their knowledge of the world to activate the appropriate schema for their interpretation. This is one difference that I noted between the participants in this study and Jenkins’ (1995) work. Jenkins noted that her participants rarely relied on the context and they usually relied on the conflicting acoustic signal or information. But, the participants in this present study, seemed to rely sometimes on the context and less on the acoustic signals, helping to reduce intelligibility.

This could be because the participants in my study are advanced learners of English.

In Token 25, Speaker three pronounced “strategic” /strəˈtiːdʒɪk/ as [strəˈtidʒɪk] in the phrase “who establish strategic partnership with China”. Here one can notice a different vowel length [i] in the second syllable. A further breakdown shows that these 31 listeners did not identify the word “strategic”. The intelligibility breakdown occurred probably because of the difference in vowel length on the second syllable. However, the earlier failure to understand the word “establish”, which occurred before “strategic” may also have been a contributory factor.

In Token 47, *deepen* /di:pən/ was pronounced as [dipɪn] with a short vowel duration on the first syllable and a close front vowel [ɪ] in the final syllable. The word caused intelligibility breakdown for 36 listeners who responded as follows:

	Listeners’ responses	NOL	ORP	ORA	SA	CA	SC	NR
1	to *dip in* access of our people to services	23 listeners	✓					
2	to *dipping* access of our people to services	12 listeners	✓					
3	to *differ* in access of our people to services	1 listener	✓					

In this token, one can observe that those who misunderstood the word “deepen” orthographically represented the duration of vowel used by the speaker. This could suggest that the length of the vowel is a major problem in this case. Apart from the duration of the vowel in the initial syllable, which caused the main intelligibility breakdown, the quality of vowel [ɪ] used by the speaker in the final

syllable could be a contributory factor to the cause of the breakdown. This is because all those who misunderstood the word *deepen* also orthographically represented the sound used by the speaker as seen in examples such as “dip **in**”, “dipp**ing**”, and “differ **in**”.

Token 57 and 58, also have multiple contributory factors: skilled is pronounced by Speaker five as [ski:d] with a long vowel length, a different vowel quality (as discussed in section 6.1.4) and non-realisation of [l] (See section 6.2.2). This distinct pronunciation caused breakdown for 46 and 38 listeners respectively. Majority of these listeners came up with realisations such as “skied”, “ski”, and “key” (see Section 6.1.4). These responses suggest that listeners have orthographically represented the quality and length of the vowel used by the speaker, in addition to the non-realisation of [l]. Thus, I suggest that vowel length difference is a contributory factor to the breakdown.

In Token 59, the vowel in the first syllable of “living” was pronounced with [i:] vowel and heard as “leaving”, “easy” and “relieving” (see Section 6.1.4). The responses suggest that a different vowel quality and length was used by the speaker. In cases such as this, it is hard to separate vowel quality from vowel length, as [ɪ] differs from [i:] in both quality and length (Cruttenden, 2004:113). Therefore, the vowel may have interacted with the length to cause the breakdown.

Finally, in Table 6.6, we have Tokens 19, 26, 36, and 42. In Token 19, the third syllable of “universalism” was pronounced with the vowel variant [a] (See Section 6.1.1); in Token 26 and Token 36, first syllable of “early” and “certain” was pronounced with [a] (See section 6.1.1); in Token 42, the final syllable of “introvert” was pronounced with [a]. In these four tokens, it is hard to separate the vowel quality from its length as [a] differs from [ɜ:] in both quality and length and I have treated them as vowel quality issues in Section 6.1.1. In addition to this problem, there are other factors that may have contributed to this breakdown (this has been discussed in section 6.1.1).

Even though, there appears to be a number of potential issues in ten (Tokens 1, 25, 47, 57, 58, 59, 19, 26, 36 and 42) of the 14 tokens that caused intelligibility breakdown due to the duration of vowel, I have considered Tokens 4, 13, 28 and 32 where obviously it was the vowel length that was the only attributable case of intelligibility breakdown. Based on these findings, I suggest that the distinct vowel length used in Token 1,25,47, 57, 58, 59, 19, 26, 36 and 42 was at the very least a contributory factor in the breakdown of intelligibility. It might be the only factor, but, in this case, I am using the straightforward tokens to support the complex ones.

Before leaving the length of vowel, it might be useful to examine tokens where speakers used a short monophthongal realisation. These tokens are shown in Table 6.7.

Table 6.7 Intelligibility breakdown involving a short monophthongal realisation of diphthong

Token no	**Speaker**	**Word**	**Pronunciation**	**Instances of Breakdown**
12	One	fame	[fem]	43
14	One	straight	[stret]	32
40	Four	way	[we]	26
41	Four	go	[go]	37

In Token 12, Speaker one pronounced *fame* /feɪm/ as [fem] in the phrase "don't let power, money, fame get into your head" (speaker one, unit Appendix 7). Looking at the vowel in "fame", the pronunciation of *fame* shows the use of short monophthong [e]. In addition to this pronunciation, the phrase in which the word occurred is problematic. The preceding words "power" "money" were pronounced as [ˈpɑ: mɔni] (see section 6.3 and section 6.1.3). The word *fame* caused intelligibility problems for 43 listeners who responded as follows:

	Listeners' responses	NOL	ORP	ORA	SA	CA	SC	NR
1	Don't let ????, money, {*fear}* get into your head	4 listeners		✓				
2	Don't let how, many, {things} get into your head	2 listeners			✓		✓	
3	Don't let harmony {*????}* get into your head	8 listeners						✓
4	Don't let pal, money, {*????}* get into your head	4 listeners						✓
5	Don't let power, money, {*????}* get into your head	9 listeners						✓
6	Don't let ????, money, {*????},* get into your head	11 listeners						✓
7	Don't let ????, ????, {*????}* get into your head	5 listeners						✓

As shown in example (1), four listeners heard *fame* as "fear". This indicates that these listeners clearly heard the voiceless labiodental fricatives /f/ but did not understand the speaker's short monophthong production of the word. In (2), eight

listeners wrote: “don’t let harmony get into your head”. For this speaker, the problem probably lies with the word “power” and “money” which these eight listeners heard as “harmony”. The mishearing of those words preceding the word in question could have contributed to the lack of intelligibility.

In (2), two listeners heard “fame” as “things”. The fact that the speaker’s intended word “power”, “money” were heard as “how many” suggests that the sequence of these words contributed to the lack of intelligibility. One explanation could be that these listeners made a personal guess substituting the word “fame” with something they are familiar with. Another possibility could be that the listeners were not expecting this word in such a construction. There are many varieties of English listeners that took part in this study leading me to infer that the expression “*don’t let power, money, fame get into your head*” is an unusual expression for people to say. Perhaps for many people, this expression would be “don’t let success and fame **go to your head**”.

Overall, thirty-seven listeners failed to understand the word *fame* as they did not write anything for the word. In this case, it is hard to tell where the problem lies. It may be the use of short [e] or the sequence of the preceding words, *power, money*. Of the 37 listeners, 34 misunderstood the preceding words “power” and 15 misunderstood “money” (as discussed in section 6.3 and section 6.1.3) which may have influenced this lack of intelligibility. However, there are also cases where the preceding words were understood, but breakdown still occurred. For instance, of the 37 listeners, nine heard the two preceding words “power” “money”, but those words did not help them understand the word “fame”.

So, which of these features of pronunciation caused the major problem for these listeners. Could it be the monophthongal usage? or the length of the vowel? It is assumed that the vowel length caused the issue. This is because most of the time, the Nigerian speakers in this study always used long monophthong [e:] as in "play" being pronounced as "[ple:]" in "*I should be able to play any role"* (Speaker one unit 3) and "*I play the lead character…*", "playing" as "[pleːɪŋ]" in "*so playing Jennifer and playing other roles*"…, "place" and "take" realised as "[ple:s]", "[te:k]" in "…*that should take place among nations*" attain as [əˈte:n] in "*and presuming that others cannot quite attain…*", "made" as [me:d] in "…*that we have made in the past*", and "make" realised as" [me:k]". This usage did not disrupt intelligibility except when it was produced with a short monophthong.

Another possible explanation is that the use of pure long vowels that might be represented as [e:] and [o:] instead of diphthong /eɪ/ and /əʊ/ is quite widespread throughout the world (Deterding & Kirkpatrick 2006) being found in many varieties of English, including those of Wales, Northern England, Scotland, some parts of America, and also many varieties of African English (Wells, 1982:382, 407, 487, 639). It is also found in Vietnamese-English (Honey, 1987), Indian English (Bansal, 1969), Thai English (Smyth, 1987), Singaporean English (Wee, 2004), Malaysia English (Baskaran, 2004) and in many of the other ASEAN countries of South East Asia (Deterding et al 2006). It seems, therefore, that Monophthongal usage causes intelligibility problems when it is shortened. This is consistent with the suggestion that "monophthongization is an

acceptable substitute for the diphthong /eɪ/ provided the sound is kept long; if it is shortened, there is a danger of confusion with /ɪ/ or /e/" (ibid: 142).

I will provide three more examples which further support the observations made so far. In Token 14, *straight* [streɪt] was pronounced as [stret] with a short monophthong in the phrase "whoever you are, keep your head straight". The distinct pronunciation caused intelligibility problem for 32 listeners who responded as follows:

	Listeners' responses	NOL	ORP	ORA	SA	CA	SC	NR
1	Whoever you are, keep your head strict	14 listeners	✓					
2	Whoever you are, ???? your head ????	7 listeners						✓
3	Whoever you are, keep your head ????	11 listeners						✓

The table given above shows that 18 listeners did not recognize the word, while 14 listeners heard "straight" as "strict". This response shows these listeners heard a short vowel. So, intelligibility breakdown occurred most likely because of the short monophthong [e] used by the speaker. However, the earlier failure to understand the word "keep", which occurred before "straight" may also have been a contributory factor as indicated in example (2).

In Token 40 and 41, the quality of the vowel in *way* and *go* is pronounced with short monophthongs that might be represented as Cardinal two [e] and Cardinal seven [o] respectively in the phrase *we still have a long way to go*. The word "way" (pronounced [we]) caused intelligibility breakdown for 26 listeners while the term "go" (pronounced [go]) was unintelligible to 37 listeners. The examples

shown below are the different realisations listeners came up with in their transcriptions.

	Listeners' responses	NOL	ORP	ORA	SA	CA	SC	NR
1	We still have a very long ??? to ???	14 listeners						✓
2	We still have a very long *time* to *go*	5 listeners			✓	✓	✓	
3	We still have a very long *reach* to *go*	5 listeners			✓	✓	✓	
4	We have a very long *place* to *go*	2 listeners			✓	✓	✓	
5	We still have a very long *way* to*????*	17 listeners						✓
6	We still have a very long *way* to *score*	4 listeners			✓		✓	

The findings show that 14 listeners[124] did not write anything for the word *way* ([we] as pronounced by speaker four) as it was unintelligible to them. The other listeners, who did not reproduce the word correctly, have used words that are semantically appropriate and syntactically correct. It is possible that these listeners did not understand the pronunciation of "way" and hence they have used semantic cues or contextual information available in the sentence to work out what they heard. This may explain the reason why some of the listeners have filled the blank space with "long time" "long reach", and "long place" instead of "long way" (See example 2, 3, and 4). A further look at these findings reveals that nearly all the speakers who had problems interpreting "fame" (as discussed above) also had difficulty recognising "way". Six Spanish (out of 6), two (out of 2) Polish, three (out of 3) Italians, had problems recognising the word *way*.

[124] (4 Spanish, 2 Greek, 1 Nepalese, 1 Indian, 1 Polish, 1 Malawi, 1 British, 1 American, and 2 Italians)

Similarly, of the 37 listeners that had problems understanding the word *go*, 36 did not write anything down for the word while 4 listeners realised the word as “score”.

The monophthong production of /eɪ / as short vowel [e] in *way* and [əʊ] as short back vowel [o] in *go* was intelligible to all the 37 British listeners and five Americans who took part in the study. It is possible that the Americans, British and others who guessed correctly the target word “way” and “go” (as pronounced by speaker four) have resorted to their knowledge of the idiom which seems to have provided clear contextual clues to the meaning of the words. Kennedy and Trofimovich (2010) argue that the semantic context available to L1 listeners may affect how accurately they understand a speech, particularly in circumstances that place a greater processing load on the listeners. For example, listeners tend to comprehend semantically predictable sentences (e.g., *The actor played the part*) better than semantically unpredictable ones (e.g., The doctor named the road). Another possibility could be that the listeners have become accustomed to Nigerian speakers producing diphthongs as short monophthongs in this exercise (so they have accommodated to this pronunciation feature of Nigerian speakers speech in this respect).

So far, this section has discussed the vowels that hindered the intelligibility of Nigerian speakers to international listeners. In the following section, I move to consider consonants which caused intelligibility breakdown when international listeners listened to Nigerian speakers of English.

SECTION TWO

6.2. Data Analysis: Consonants Affecting Intelligibility of Nigerian Speakers of English to International Listeners (ILs)

In this section, I discuss consonants that led to intelligibility breakdown among 100 international listeners (42 NS and 58 NNS) who listened to Nigerian Speakers of English. I will consider the non-realisation of consonants, differences in consonant realisation, and consonant clusters. The table provided below presents an overview of each of the consonant that I have identified, alongside the number of instances of intelligibility breakdown associated with each.

Table 6.8: Consonants causing intelligibility breakdown

Phonological Factor	**Tokens**	**Instances of intelligibility breakdown to ILs**
Non-realisation of consonants		
[h]	16 (high)	40
	51 (housing)	35
	38 (enhance)	36
[k]	39 (acting)	32
[l]	17 (moral)	24
	18 (moral)	39
	49 (tool)	47
	50 (agriculture)	31
	54 (total)	29
	56 (critical)	38
Consonant cluster simplification		
initial cluster	15 (humility)	43
final cluster	30 (must be)	48
	45 (midst)	31
	52 (needs)	29
	57 (skilled)	46
	58 (skilled)	38
Differences in consonant realisations		
[tʃ]	27 (mutual)	37
	35 (mutual)	34
[z]	34 (as)	44
/ʒ/	55 (measure)	31

6.2.1. Non-realisation of Consonants

This involves the non-use of a consonant segment in a word. It is often called "consonant deletion" in several studies (e.g. Collins & Mees, 2003; Gimson, 2008; Hawkins, 1984; Jenkins, 2000a; Deterding, 2013; Kaur, 2009). However, in this present study, a non-judgmental approach is taken to represent the non-use or non-realisation of a single consonant segment in words. For example, the non-use of the alveolar lateral /l/ in "moral" and "tool" is categorised under non-realisation of consonants; whereas the non-use of voiced and voiceless alveolar plosive /d/ and /t/ in "midst" is categorised as a simplification of consonant clusters and discussed in Section 6.2.2. In this study, the non-realisation of consonants contributed substantially to ten tokens of intelligibility breakdown. These tokens are listed in Table 6.9.

Table: 6.9. Intelligibility breakdown involving non-realisation of consonants

Token no	**Speaker**	**Word**	**Pronunciation**	**Instances of Breakdown**
16	Two	high	[aɪ]	40
38	Three	enhance	[ɪnˈɑ:ns]	36
51	Five	housing	[ˈaʊzɪŋ]	35
39	Four	acting	[ˈætɪŋ]	32
17	Two	moral	[ˈmɒra]	24
18	Two	moral	[ˈmɒra]	39
49	Five	tool	[tu:]	47
50	Five	agriculture	[ˈa:grɪkɔ:tʃər]	31
54	Five	total	[to:ta]	29
56	Five	critical	[krɪ ɾɪˈkɑ]	38

In the first three, Token 16, 38, 51, the glottal fricative [h] was not used; in the fourth one, Token 39, the voiceless velar plosive [k] was not pronounced; and in all the others, the [l] was not pronounced. I will now analyse and discuss these

tokens. In Token 16, speaker two said: "[aɪ]". The target word here was "high" in the following extract:

> *Extract 6.24:*
> *Context*: I find the very notion of political correctness/ very condescending. /eh It's an assumption of a kind of eh eh/ Standing on **high** "[aɪ] moral grounds/ and eh presuming that others cannot quite attain/that moral height … (Speaker two, unit 1-5)

In this extract, speaker two did not use the consonant segment (the glottal /h/) in "high". The non-realisation of [h] in "high" made it sound like "eye" which caused intelligibility breakdown for 40 listeners who responded as follows:

	Listeners' responses	NOL	ORP	ORA	SA	CA	SC	NR
1	Standing on {?????} moral grounds	14 listeners						✓
2	Standing on {?????} …… grounds	9 listeners						✓
3	Standing on {right} moral grounds	7 listeners	✓		✓		✓	
4	Standing on ~~eye~~ moral grounds	3 listeners	✓					
5	Standing on {?????} moral grounds	6 listeners						✓
6	Standing on eye (moral) grounds	1 listener	✓					

From the transcription above, most of the listeners (23) did not understand the pronunciation of "high" as they were unable to write anything for the word while those listeners (17) who provided a written cue came up with suggestions such as "eye" [aɪ] and "right" [raɪt]. These responses indicate that listeners recognised the vowel [aɪ] but did not use the glottal [h] which further shows the non-use of [h] in "high" could be the cause of the intelligibility problems.

In Token 38, speaker three pronounced “enhance” [ɪnˈhɑːns] as [ɪnˈɑːns] in “…to enhance their own development and keep it going”. We can see that the glottal fricative [h] was not used in the second syllable. This distinct pronunciation caused intelligibility breakdown for 36 listeners who did not provide any written response to the word.

Similarly, in Token 51, speaker five pronounced “housing” /ˈhaʊzɪŋ/ as [ˈaʊzɪŋ]. The distinct pronunciation of the word was problematic to 35 listeners. Before considering the listeners’ realisations of the word, the wider context for token 51, in which *housing* is misunderstood is shown below:

> *Extract 6.25:*
> *Context*: Yeah, our decision to focus on power, /**agriculture** [ˈaːgrɪkɔːtʃər], transportation, and **housing** [ˈaʊzɪŋ]/was in response to the feedback we were getting, / the compelling needs to create jobs/ beyond banking and telecoms (Speaker five, unit 9-13)

	Listener response	NOL	ORP	ORA	SA	CA	SC	NR
1	????, transportation and????	16 listeners						✓
2	are on, transportation and?????	1 listener						✓
3	our record, transportation and ?????	12 listeners						✓
4	nature, transportation and?????	1 listener						✓
5	agriculture, transportation and?????	5 listeners						✓

From these responses, all the 35 listeners who experienced intelligibility breakdown abandoned the word “housing “as they could not understand the pronunciation. The cause of the intelligibility breakdown seems to be the non-realisation of [h]. This is because we have examined Token 16, where the non-

use of [h] was the only cause of the problem. So, it is possible that this is the cause of intelligibility breakdown in this case.

We should note that the non-realisation of [h] at the start of a word, known as H-dropping[125] by many scholars, is characteristics of London Speech (Wells, 1982:321; Deterding, 2010) and its absence has a long history of being regarded as "vulgar" and as making the speaker sound 'ignorant' (Mugglestone 2003:95 cited in Deterding 2013). In fact, most speakers often omit the [h] from the start of the weak forms of pronouns such as *him* and *her* (Roach 2009:91); and furthermore [h] is generally absent from some words borrowed from French, including *hour, honest and honour*. Nevertheless, studies (Jenkins 2000; Atechi 2004; Deterding et al. 2013) have confirmed that the appropriate use of [h] is crucial for maintaining intelligibility. This corresponds with Deterding (2013) observation where a listener from Brunei was unable to understand a speaker from Nigeria who pronounced "house", "higher", "hold", "handle" and "hot cake" with no [h].

Next, let us consider intelligibility breakdown arising because of the non-realisation of voiceless velar plosive [k]. In Token 39, Speaker four is sharing her experience as an actress and a movie maker. In discussing this experience, she pronounced the word *acting* /ˈæktɪŋ/ as [ˈætɪŋ] in the below context:

> *Extract 6.26*
> *Context*: A lot of things have really changed/ ehm **acting** [ˈætɪn] and production wise/yes, we have really, really improved (Speaker four, unit 1-3)

[125] This is hegemonic language which suggests deviance, and this is the reason I have not adopted the term in this present study.

In this extract, Speaker four did not use the voiceless velar plosive /k/ in the first syllable of *acting* and in doing so, reduced the length of the word. This caused intelligibility breakdown for 32 listeners who responded as follows:

	Listener response	NOL	ORP	ORA	SA	CA	SC	NR
1	*??????* and production wise	19 listeners						✓
2	*Art* and production wise	5 listeners	✓					
3	*Art in* and production wise	6 listeners	✓					
4	*set* and production wise	1 listener			✓	✓		
5	*seen* our production wise	1 listener						

The non-realisation of the velar consonant /k/ in the coda of the first syllable of “acting” caused a major issue for 32 listeners despite the background knowledge. Out of the 32 listeners who had problems with the word “acting”, 19 left the word blank as they could not understand it while in (2) and (3), eleven listeners transcribed it as “art” suggesting they did not hear the velar plosive /k/. In (4) and (5), it is possible that the listeners did not hear the word but they may have employed their knowledge of the context to activate the schema for their interpretation. However, a word of caution is appropriate here: token 39 is the only case in my data where a variant lacking the voiceless velar plosive [k] was used. This case may be due to the effect of “noise”. It will be worth for further research to be done to determine whether this token is the case of intelligibility breakdown or not.

The remaining 68 listeners out of 100 heard the word correctly. One possibility is that they resorted to their background knowledge or the content schemata which guided the linguistic representation of events and scenes in the discourse. Before the listening exercise, I informed the listeners about who the speakers in this study are so they are aware that the fourth speaker is an actress and a movie producer. Hence, when they encountered a new experience or word, very often, it appears that they could relate them to their knowledge from experience.

Finally, let us consider intelligibility breakdown arising because of the non-realisation of the lateral [l]. I will start by discussing Token 49 which is arguably a straightforward case. Thereafter, I will deal with complex tokens, where there appears to have been multiple factors causing the breakdown. In Token 49, the final consonant in *tool* was not realised resulting in *tool* being pronounced as [tu:] in the phrase "…as the critical tool for changing people lives" (speaker five, unit 8). The lack of dark /ɬ/ in "tool" caused intelligibility problems for 47 listeners who responded as follows:

	Listener response	NOL	ORP	ORA	SA	CA	SC	NR
1	as the critical *????* for changing people lives	22 listeners						✓
2	as the critical *to* for changing people lives	19 listeners	✓		✓	✓	✓	
3	as the critical *too* for changing people lives	2 listeners	✓					
4	as the critical *tube* for changing people lives	1 listener	✓					
5	as the critical *view* for changing people lives	1 listener	✓					
6	as the critical *truth* for changing people's lives	2 listeners	✓					

As shown above, all listeners' who misunderstood the word identified the close back vowel [u:] as indicated in "to" [tu:], "too" [tu:], tube [tu:b], "view" [vju:], and "truth" [tru:θ]. Also, 22 listeners correctly identified the onset and nucleus[126] of "tool" [tu:] (as indicated in example (2), (3) and (4)) but the coda or final consonant [l] was not pronounced. In (4), a British listener identified the final consonant as bilabial plosive /b/ and in (6) two British listeners recognised it as dental fricative /θ/. These responses suggest that the final consonant [l] may be the cause of the intelligibility breakdown. A large number of listeners (22) did not write anything down as they found it unintelligible.

I will now move to discuss complex cases (Tokens 54, 17, 18, 56 and 50). In Token 54, Speaker five pronounced the word *total* as [to:ta] in the phrase "…to create total growth in the economy" (speaker five, unit 17). The pronunciation was problematic to 29 listeners who did not understand the word as they could not write anything for *total*.

	Listener response	NOL	ORP	ORA	SA	CA	SC	NR
1	to create ??? growth in the economy	29 listeners						✓

The absence of [l] at the coda of the word-final syllable of "total" seems to be the main issue although the full vowel in the final syllable could be a contributory factor. Of the 29 listeners who did not understand the word *total*, 13 of them could

[126] In phonetics and phonology, the nucleus (sometimes called peak) is the central part of the syllable, most commonly a vowel. In addition to a nucleus, a syllable may begin with an onset (consonant preceding the nucleus) and end with a coda (consonants following the nucleus) (Dairo, 1998).

not interpret “tool” (pronounced as [tuː] by Speaker five). This suggests that the non-use of [l] is likely to be the cause of intelligibility or a contributory factor.

Similarly, in Token17 and 18, the final syllable of “moral” (two occurrences) was pronounced with no [l], and also, a distinct vowel [a] was used in the same syllable (as discussed in Section 6.1.4). This caused intelligibility breakdown for 24 and 39 listeners. In Token 56, “critical” was pronounced with no [l]. In addition to this pronunciation, the variant [a] was used in the final syllable; an alveolar tap [ɾ] was used in the second syllable with a different stress placement (see Section 6.1.4). Finally, in Token 50, there was no [l] in the third syllable of “agriculture” with the vowel [ɔ] (see Section 6.1.4). This caused an intelligibility breakdown for 31 listeners. Even though in all these five tokens, other factors may have contributed to the intelligibility breakdown, we have examined Token 49, where it was the non-use of [l] in “tool” that was the only attributable cause of intelligibility breakdown. Based on this, I suggest that the non-use of [l] in Tokens 54, 17, 18, 56, and 58 is at least a contributory factor.

The fact that the non-realisation of dark [l] in this study caused intelligibility breakdown for listeners resonates with results reported by Deterding (2013). In this study, a Hong Kong speaker’s pronunciation of “wall” and “call” and an Indonesian’s pronunciation of “world” was [wɔː], [kɔː] and [wɜːd] respectively; these words were heard as “war”, “record” by a Malaysian Listener and “war” for “world” by Taiwan Listener. Deterding (2013) concluded that the missing dark-l is what caused this intelligibility breakdown. However, it should be noted that in my present study, there were five words in which the dark [l] was

pronounced as a close back vowel [ʊ] in “able” (two times), “people” (four occurrences), final syllable of “comfortable”, “reasonable” (two occurrences) and “sustainable”. These words were recognised by all listeners. These results confirm Jenkins (2000; 2002) claim that pronouncing dark-l as [ʊ] is not problematic but omitting the [l] entirely can sometimes give rise to misunderstandings.

In sum, I have discussed how most of the non-realisation of consonants that caused intelligibility breakdown involved the non-use of post-vocalic [l] (six instances altogether). For instance, the final segments in the following words were not realised, resulting in “tool” being pronounced as [tu:], “moral” as “[ˈmɒra]” (two occurrences), “total” as “[to:ta]”, “critical” as “[krɪrɪˈka]” and “agriculture” as “[ˈa:grɪkɔ:tʃər]”. These Post-vocalic /l/ “deletions” may be related to speakers’ L1, for instance, Nigerian speakers preferring the open syllable are said to employ a strategy of “consonant deletion” (Simo Bobda, 2007). There were three cases of intelligibility breakdown where [h] was not used resulting in “high” being pronounced as “[aɪ]”; “housing” as “[ˈaʊzɪŋ]”; and “enhance” as “[ɪnˈɑ:ns]”. This corresponds to Simo Bobda’s (1995) and Awonusi’s (2009) observation that in Nigerian English, [h] is often not realised especially among Yoruba and other southern accents in Nigeria. Finally, there was only one example where [k] was not realised and caused intelligibility breakdown. This case may be due to the effect of error for example. More research is needed to determine whether this token is the case of intelligibility breakdown or not.

In the section that follows, I focus on the intelligibility breakdown arising because of the simplification of consonant clusters.

6.2.2. Consonant Clusters Simplification

In this study, a consonant cluster is taken to represent a group of consonants that occur within one syllable[127]. This might occur at the beginning of individual words (e.g. "cluster" [ˈklʌs təˈ]), or at the end of words (e.g. consonants). English allows up to three consonant sounds in any position in a word and might have as many as four consonant phonemes (Roach, 2009b). Not all languages have such complicated syllable structure with many languages requiring a strict CV structure. The method used by Nigerian speakers to simplify 'problematic' syllables (with consonant cluster), is "deletion" and there are claims that this is a threat to intelligibility (Jenkins, 2000; 2002).

In this study, there were six tokens of intelligibility breakdown that resulted from simplifying consonant clusters. These six tokens are shown in Table 6.10.

Table: 6.10 Intelligibility breakdown involving consonant clusters

Token no	**Speaker**	**Word**	**Pronunciation**	**Instances of Breakdown**
15	One	humility	[juːˈmɪləti]	43
30	Three	must be	[mɔ biː]	48
45	Four	midst	[mɪs]	31
52	Five	needs	[niːs]	29
57	Five	skilled	[skiːd]	46
58	Five	skilled	[skiːd]	38

I will begin by discussing Tokens 15 and 45 because I consider them to be straightforward. Thereafter, I will deal with tokens where there appears to have been a build-up of factors that caused the intelligibility breakdown. In Token 15,

[127] If the group of consonants occur in two consecutive syllables, it is called consonant sequence (an example is a combination of syllable-coda and syllable onset in polysyllabic words such as "cluster') (Pulgram et al 1963).

speaker one simplified the initial consonant cluster in “humility” by not using the glottal fricative /h/. *Humility* (pronounced as [juːˈmɪləti]) was problematic to 43 listeners. Here is the context and their interpretations:

> *Extract 6.27*
> *Context*: Yes, the character Jennifer its crazy. / I channel everything into it/ to get the character/ and to still be me. /Just be yourself, be original. / don’t let power, money, fame get into your head. /Just be you. /Whoever you are, keep your head straight. /**humility** [juːˈmɪləti] really matters, you have to be humble (Speaker one, unit 17-25).

	Listener response	NOL	ORP	ORA	SA	CA	SC	NR
1	*You* really matter; you have to be humble	14 listeners	✓					
2	*??????* really matters; you have to be humble	19 listeners						✓
3	*Unity* really matters; you have to be humble	6 listeners	✓					
4	*Nothing* really matters; you have to be humble	1 listener			✓	✓	✓	
5	*Family* really matters; you have to be humble	1 listener			✓		✓	
6	*The* thing really matters; you have to be humble	2 listeners			✓		✓	

As shown above, the utterance in which the word *humility* appears provides sufficient contextual clue to the word. In other words, the context the word occurs in is sufficient to aid the comprehension of the message for the listeners in this instance. Yet, the word still caused intelligibility breakdown for 43 listeners. Of the 43 listeners, 19 listeners did not put anything down for *humility* as they did not understand the pronunciation of the word. Fourteen listeners[128] understood “humility” as “you” [juː] while six British listeners perceived the word as “unity”

[128] (3 Americans, 2 Greeks, 6 British, 1Spanish, 1 Italian, and 1 Indian)

[ˈjuːnəti]. Both responses suggest that the non-realisation of /h/ caused problems for these listeners. This is because the syllable in *you* and the first syllable in *unity* are [ju:]. In (4) of the transcriptions, a listener[129] interpreted the word *humility* as "nothing" which does not give any pronunciation clues at all. It is quite possible that this listener has used semantic cues to work out what he heard. A response such as "nothing" is common in the frame "really matters". Therefore, the listener may have chosen this word to fit the context. In (5), an Austrian listener interpreted the word as "family", and in (6), two listeners[130] interpreted the word as "only thing". These responses suggest that the listeners have not understood the word pronounced by the speaker and may have resorted to guessing based on the background context.

In token 45, Speaker four in describing how she gets inspiration when writing a play script said the word *midst* [mɪdst] as [mɪs] in the extract below:

> *Extract: 6.28*
> *Context*: … I am most of the time by myself/and when I sit down at times/some things just cross my mind/, and I start to write/ or I'm in the **midst** [mɪs] of some people/and I see things… (Speaker four, unit 9-12)

We can see that the final consonant cluster in "midst" is simplified to [s]. The simplification of the final cluster in "midst" created a word "miss" that did not fit the context of the word. This pronunciation caused intelligibility problems for 31 listeners who responded as follows:

[129] (a British listener)
[130] (Italian and Indian)

	Listener response	NOL	ORP	ORA	SA	CA	SC	NR
1	or I'm in the????? of some people	4 listeners						✓
2	or I'm in the *mix* of some people	1 listener	✓					
3	or I'm in the *miss* of some people	24 listeners	✓					
4	or I'm in the *mist* of some people	2 listeners	✓					

Four listeners[131] were unable to provide any written clues as they did not write anything for the word "midst". In example (2), a Nepalese heard *midst* as "mix" indicating that the [d] and the [t] was not used. Two listeners[132] understood the word as "mist" suggesting the cluster simplification is causing the issue. 24 listeners[133] wrote [mɪs]. This response shows that they disregarded contextual cues and literally transcribed what they heard even though it made no sense to say *in the miss of people*. The conflict between the acoustic signals they heard and the context in which the word occurred probably made the processing of the word in question challenging for the listeners.

However, 69 listeners[134] treated this as a cluster simplification and transcribed the speaker's target word *midst*. The consonant cluster reduction made no difference to the 69 listeners. It is worth noting that the elision of [d] and [t] in *midst* did not affect intelligibility among the British and American listeners. This could be because many native speakers also omit the [t] in such environments.

[131] (1 Norwegian, 1 Romanian, 1 Thai, 1 Austrian)
[132] (Palestinian, Italian)
[133] (5 Spanish, 2 Italians, 2 Greeks, 1 Iranian, 1 Brazilian, 3 Germans, 2 Russians, 2 Norwegians, 1 Indian, 1 Austrians, 2 Chinese, 1 Saudi Arabian, 1 Polish)
[134] (37 British, 2 German, 5 Americans, 2 French, 4 Ghanaians, 3 Malawians, 6 Indians, 4 Norwegians, 1 Korean, 1 South African, 1 Spanish, 1 Singaporean)

Thus far in this section, I have discussed two clear cases where consonant cluster simplification was the only cause of the intelligibility breakdown. I now move to consider complex cases (30, 52, 57 and 58). In token 30, speaker three is discussing Chinese trade and investment in Nigeria. In order to establish this business agreement, speaker three said *we need that our laws and rules "must be" respected*, where the consonant cluster in "mu<u>st</u> <u>b</u>e" is simplified to [b], though in addition the vowel quality [ɔ] is used (See section 6.1.3). This pronunciation of "must be" as [mɔ bi:] caused intelligibility problems for 48 listeners who responded as follows:

	Listeners' responses	NOL	ORP	ORA	SA	CA	SC	NR
1	We need that our laws and rules *are* respected	8 listeners			✓	✓	✓	
2	We need that our laws and rules???? be respected	21 listeners						✓
3	We need that our laws and rules *will* be respected	5 listeners			✓	✓	✓	
4	We need that our laws and rules *may* be respected	1 listener			✓		✓	
5	We need that our laws and rules *should* be respected	3 listeners			✓	✓	✓	
6	We need that our laws and rules *more* be respected	3 listeners	✓					
7	We need that our laws and rules ~~*more*~~ be respected	7 listeners	✓					

From the responses, the fact that the majority of listeners who failed to understand the phrase "must be", recognised "be" may suggest that the problem lies in the pronunciation of the word "must". It could be that the listeners did not understand the pronunciation of "must" and hence they have used semantic cues or information available in the sentence to work out what they heard. This may explain the reason why some listeners have filled the blank space with an

auxiliary verb (See example 1, 3, 4 and 5 in the table above). A critical look at a response such as “more” (see example 6) demonstrates that listeners did not recognise the consonant clusters, but they orthographically represented the vowel quality [ɔ] used by the speaker. These findings show that the issue here is the vowel quality (this has been discussed in section 6.1.3), but the consonant cluster in the coda of the word “must” could be a contributory factor nevertheless.

In token 52, speaker five pronounced needs [ni:dz] as [ni:s] in the phrase “the compelling needs to create jobs”. The pronunciation shows the non-realisation of voiced alveolar plosive [d] and devoicing of the final consonant [z]. This pronunciation caused problems for 29 listeners who failed to respond as they did not write anything for the word. Since the listeners did not provide any response for the word, it is hard to know which of these features of pronunciation contribute most to the misunderstanding: the non-realisation of the voiced alveolar plosive [d], or the devoicing of the final consonant [z]. It is assumed that both features of pronunciation caused the intelligibility failure because either [ni:z] (with non-use of /d/) or [ni:ds] (with devoiced /z/) would have been understood. In reality, it is normal in all varieties of English for final [z] to be devoiced (Docherty, 1992:35) and for [d] or [t] to be elided in final clusters (Jenkins, 2002). So, it may be when the two features are combined that there is an intelligibility breakdown.

Finally, in Token 57 and 58, as already discussed in Section 6.1.4, speaker five pronounced “skilled” as [ski:d] which caused loss of intelligibility for 46 and 38 listeners respectively. The issue seems to be that the final cluster [ld] is simplified via the non-use of [l] which is why “skilled” is heard as “skied”, “ski”

and “key” (see Section 6.1.4) though another major problem is the length and the quality of the vowel (see Section 6.1.5 and section 6.1.4).

In conclusion, we can see from the results in this section that out of the six tokens of intelligibility breakdown caused by simplifying consonant clusters, only one token was due to simplifying word-initial consonant cluster and it involved /h/. The remaining five tokens were due to simplifying final consonant cluster. The simplifications include the following words/phrases, i.e. “must be” pronounced as [mɔ bi:], “needs” as [ni:s], “midst” as [mis] and “skilled pronounced as [ski:d] on two occasions. The five tokens of final cluster simplification caused intelligibility problems as the simplifications created new words that did not fit the context (e.g. [mis], [ni:s] and [ski:d]), and non-words or approximations of the words and phrases (e.g. [mɔ bi:]).

Some scholars (e.g. Jenkins, 2002a) argues that final consonant cluster simplifications are permissible (as long as the simplifications follow English L1 rules) as final clusters are quite difficult to articulate smoothly except in slow, careful speech. Although the word-final consonant clusters in [mis], [ski:d], and [nis] were simplified according to Nigerian English rules, these pronunciations still caused intelligibility problems. The final cluster simplification in “must be” [mɔ bi:] did not follow permissible final cluster simplification rules of L1 English and Nigerian English simplification rules (See Simo Bobda 2007 for segmental rules of Nigerian English phonology).

However, there were six instances where cluster simplification did not lead to any intelligibility failure. All the examples involve final plosive [t]. This include “must” realised as [mʌs] by speaker two in “you must not give offence here”; “first” as [ˈfɜːs] in “em em I think the point to make first is that…”; and “don’t let” as [doːn let] e.t.c. The full list of all cluster reduction that did not cause problems in this study is given in Appendix 9.

In the next section, I look at the intelligibility breakdown arising because of the differences in the production of consonants.

6.2.3. Differences in Consonant Realisations

In this study, differences in consonant realisation is taken to mean the use of a consonant other than that expected in the reference accent. For instance, the use of /ʃ/ (voiceless palato-alveolar fricative) in “mutual” which results in the realisation [ˈmjuːʃuəl]. There were four tokens of intelligibility breakdown caused by the differences in consonant realisation. These tokens are listed in Table 6.11 below:

Table 6.11 Intelligibility breakdown involving differences in consonant realisation

Token no	**Speaker**	**Word**	**Pronunciation**	**Instances of Breakdown**
27	Three	mutual	[ˈmjuːʃuəl]	37
35	Three	mutual	[ˈmjuːʃuəl]	34
34	Three	as	[əs]	44
55	Five	measure	[ˈmeʃə]	31

In the first two Tokens, 27 and 35, voiceless palato-alveolar affricate /tʃ/ is pronounced with a voiceless palato-alveolar fricative [ʃ]; in Token 34, voiced alveolar fricative /z/ is pronounced with its voiceless counterpart [s] and in the last one, (Token 55), voiced palato-alveolar fricative /ʒ/ is realised by voiceless palato-alveolar fricative [ʃ]. I will discuss all these tokens in more detail. In token 27, speaker three said *“mutual” as* [ˈmjuːʃuəl] in the given extract:

> *Extract 6.29*
> *Context*: whatever you want that we have,/let us let it be of **mutual** [ˈmjuːʃuəl] advantage./ em em we want something and what do we want?/… we want infrastructure/ and if you can give us that,/yes, and we will pay for it either directly/or we will take loan at reasonable interest rate/and we pay as and when due/now this is what we want/and this is what we should get/and then we ay alright/when we do this, it’s for **mutual** [ˈmjuːʃuəl] benefit... (Speaker three, unit 7-22)

The pronunciation shows the use of voiceless palato-alveolar fricative [ʃ] in the second syllable of “mutual”. This usage is traceable to the speaker’s L1. In

Yoruba language the voiceless palato affricate /tʃ/ is absent and as a result, some Nigerian speakers of English from the southern region (e.g. Yoruba speakers) often use the palato-alveolar fricative [ʃ] which is present in their languages (Bamgbose, 1971; Eka, 1985; Simo Bobda, 2007; Sotiloye, 2007; Fakoya, 2007). This pronunciation caused problems for 37 listeners who failed to respond as they did not write anything for the word. The word reoccurred towards the end of this speaker's conversation and was still pronounced as [ˈmjuːʃuəl]. This pronunciation caused intelligibility breakdown for 34 listeners who responded below:

	Listener response	NOL	ORP	ORA	SA	CA	SC	NR
1	when we do this; it's for???? benefit	19 listeners						✓
2	when we do this; it's for good benefit	4 listeners			✓		✓	
3	when we do this; it's for our benefit	11 listeners			✓	✓	✓	

It is quite possible that some of the listeners have used semantic cues to work out what they heard. A response such as "*our*" could be an indication that these listeners have not understood the word pronounced by the speaker and have resorted to guessing based on the background context.

In Token 34, speaker five pronounced "as" /əz/ as [əs] in the phrase "…*and we will pay as and when due*". The pronunciation shows the use of voiceless alveolar fricative [s] for voiced alveolar fricative [z]. This pronunciation caused intelligibility breakdown for 44 listeners whose response is as follows;

	Listener response	NOL	ORP	ORA	SA	CA	SC	NR
1	and we will pay ask and when due	30 listeners	✓		✓			
2	and we will pay ass when due	1 listener	✓					
3	and we will pay ????? and when due	13 listeners						✓

As shown in the listeners' transcriptions, 13 listeners failed to respond as they did not write anything for the word. A critical look at the responses also indicates that all listeners who misunderstood "as" have heard voiceless alveolar fricative [s] in "as" as indicated in their transcriptions "ask" and "ass". Therefore, the use of consonant variant [s] could be the sole phonological factor that causes the word to be misunderstood.

Finally, in token 55, speaker five pronounced the word "measure" [ˈmeʒə/ as [ˈmeʃə] in the given extract:

> *Extract 6.30*
> *Context:* well, hmm, hmm, the reason that we exist as a government is to deal with challenges/so they exist in their full **measure** [ˈmeʃəɾ] (Speaker five, unit 18-20).

It can be seen in the above extract that the speaker pronounced the consonant in the final syllable of "measure" with a voiceless palato-alveolar fricative [ʃ]. The pronunciation of the word caused intelligibility problems for 31 listeners who responded as follows.

	Listener response	NOL	ORP	ORA	SA	CA	SC	NR
1	So, they exist in their full ??????	30 listeners						✓
2	So, they exist in their full capacity	1 listener			✓	✓	✓	

From the listeners' responses given in the table above, it can be observed that there are no clues as to what caused the intelligibility breakdown because 30 listeners record nothing at all for the word "measure" while the only one listener seems to have chosen a word that is semantically appropriate. A response such as "full capacity" is a common collocation.

Apart from the four tokens of intelligibility breakdown caused by differences in consonant realisations, there were four alternative realisations of consonants that did not cause phonological unintelligibility in my data. This is the realisation of dental fricatives [θ], [ð], as [t] and [d]; velar nasal [ŋ] as [n] and postvocalic [l] as [ʊ] (L vocalisation). The alternatives to dental fricatives /θ/, /ð/ appeared 20 times; the realisation of velar nasal /ŋ/ as [n] appeared 15 times and the realisation of postvocalic /l/ as [ʊ] occurred 5 times. These include the following words, "something" pronounced as [ˈsʌm tɪnz], "nothing" as [ˈnʌtɪn], "thought" as [tɔːt], "think" as [tɪnk], "growth" as [grəʊt], "them" as [dəm], "the" as [də], "this" as [dɪs], "that" [dæt], "things [tɪnz], "going" as [ˈgoːɪn] "able" as [ˈeɪbʊ], "people" as [piːpʊ] (two occurrences) and final syllable of "reasonable" [ˈrizᵊnəbʊ] (two occurrences). This conclusion concurs with some of the research results of Jenkins (2000). She found that the alternatives to the dental fricatives /θ/, /ð/,and the regular realisation of postvocalic [l] as [ʊ] or clear [l] was unproblematic for EIL intelligibility throughout her data.

As Pennington (1996) points out, the dental variants [t] and [d] occur in many areas of Britain and in many indigenous varieties of English, such as African and Carribean, as well as in many learner varieties. She argues that 'the recurrence of these variants in so many different areas may mean that the [t] and [d] pronunciations are in some sense simpler, or less marked, phonetically speaking, than are the interdental pronunciations of the phonemes of the /θ/, /ð/ (see Jenkins, 2000:103-4 for discussion on markedness). Brown also argues that the relatively low functional load of the dental fricative phonemes in English provides an explanation of why alternatives to these phonemes are mainly unproblematic (Brown, 1991).

Swell (2010) maintains that the argument can be broadened to include postvocalic /l/ "substitutions" such as L vocalisation. There are few minimal pairs involving these sounds, but the issue is made harder to assess by the fact that vocalisation may lead to vowel changes and possibly homophony (Wells 1982:313). Turning to synchronic evidence, a general tendency towards L vocalisation is suggested by its occurrence in many NS varieties, so that in New Zealand English 'vocalised /l/ is now so prevalent that many people cannot make a dark [l] pre-consonantally' (Bauer 1986:231 cited in Swell 2010:51). Diachronic evidence also suggests that L vocalisation is a commonly attested phenomenon, not only in English but also in other languages (Latin, French, Portuguese, and Spanish) (Shockey 2003; Swell, 2010).

In summary, there were a total of four tokens of intelligibility breakdown caused by an alternative to the referent consonant sound. For instance, in Token 27 and 35, [tʃ] (voiceless palato-alveolar affricate) pronounced with [ʃ] (voiceless palato-alveolar fricative) in the second syllable of “mutual” caused intelligibility breakdown for 37 and 34 listeners respectively. In Token 34, [z] (voiced alveolar fricative) pronounced with [s] (voiceless alveolar fricative) in “as” caused problems for 44 listeners. Finally, in Token 55, [ʒ] (voiced palato-alveolar fricative) pronounced with [ʃ] (voiceless palato-alveolar fricative) in “measure” caused intelligibility failure for 31 listeners.

However, it should be noted that I found only one token of intelligibility breakdown involving the alternative to [z]; and [ʒ]. This may be due to the effect of noise or speaker’s production error. More future research may be done to determine whether these are cases of intelligibility breakdown or not.

Having discussed the vowels and consonants that affected the intelligibility of Nigerian speakers to international listeners, the following section considers other causes of intelligibility breakdown that do not quite fit into any of the categories or patterns already discussed.

6.3 Other Tokens of Intelligibility Breakdown

There are seven tokens of intelligibility breakdown, which do not fit into any of the categories already discussed. They are listed in Table 6.12.

Table 6.12 Other tokens of Intelligibility Breakdown

Token no	Speaker	Word/text	Pronunciation	Instances of Breakdown
9	One	channel	[ˈtʃæl]	56
10	One	power	[pa:]	60
63	Six	youth	[juːθ]	35
20	Two	exterior	[ɪkˈstɪə riər]	37
21	Two	directed	[dɪˈrektɪd]	32
22	Two	interior	[ɪnˈtɪə ri ə]	28
61	Six	constituency	[kənˈstɪtʃuən si]	41
44	Four	at times	[æʔ taɪmz]	56

In Token 9, Speaker one pronounced “channel” /ˈtʃænᵊl/ as [ˈtʃæl] in the phrase “I channel everything into it to get the character…” Here, we can see that the word “channel” is pronounced with just a hint of a second syllable. This pronunciation caused intelligibility breakdown for 60 listeners whose responses are as follows.

Listeners’ response:

(1) I *???????* everything into it (33 listeners)
(2) I *tell* everything into it (15 listeners)
(3) I *try* everything into it (5 listeners)
(4) I *shall have* everything …into it (2 listeners)
(5) I *challa*… it everything into it (1 listener)

From the transcription above, most of the listeners (33) did not understand the pronunciation of “channel” as they were unable to write anything for the word while some other listeners came up with suggestions such as “tell”, “shall”, “challa”. These responses show that listeners recognised [l] in the final syllable but omitted the remaining part of the syllable. This could further suggest that it is the missing second syllable that is the cause of intelligibility breakdown.

However, we cannot rule out the possibility that this is simply a speech error and such forms are always likely to cause a breakdown.

Similarly, In Token 10, the word *power* /paʊəʳ/ is pronounced as [pa:] in the phrase "*don't let power, money, fame get into your head*" *[do:n let ˈpa:mɔni fem get intu jɔr hed]*. The vowel quality in "power" is pronounced with [a:] with no second syllable. In addition to this, "power" was stressed, and the following word "money" was pronounced as [mɔni] (see section 6.1.3). The pronunciation of power as [pa:] caused intelligibility breakdown for 60 listeners who came up with these realisations:

Listeners' responses:

(1) ????? (33 listeners)
(2) palm (12 listeners)
(3) pum (1 listener)
(4) harmony (12 listeners)
(5) paw (1 listener)
(6) bad (1 listener)

As shown above, 33 listeners[135] did not attempt to transcribe the word "power" as they did not understand it. 12 listeners[136] heard *palm* [pa:m] and a South Korean heard *pam.* These responses demonstrate that they heard [a:] while the second syllable is missing. It also shows the first sound segment /m/ of the next word (money). 12 listeners[137] heard "power" as "harmony". This response

[135](9 British, 4 Spanish, 3 Indians, 2 Malawian, 2 Polish, 1 Greek, French, Italian, Nepalese, German, Austrian, Thai, Singaporean, Brazilian, Ghanaian, Saudi Arabian, Italian and Chinese)
[136](4 British, 2 Malawian, 1 Russian, 2 Norwegians, 1 American, 1 Italian, and 1 Austrian)
[137](6 British, 1 American, 1 Spanish, 1 Chinese, 1 Indian, 1 Norwegian, and 1 Greek)

suggests that the listeners heard [a:] in the first syllable and an omitted second syllable. This response also shows that the pronunciation of the subsequent word (money) is overlapping with the word power. So, what is causing the intelligibility breakdown? Could it be the vowel quality or the missing syllable or the sequence of words in the phrase? It is assumed that the missing syllable is the problem because the word "power" occurred in speaker five excerpt and was pronounced as [pa:wa] with a long monophthong. This pronunciation never caused intelligibility problems for listeners as they found the word intelligible. This led me to conclude that it is the missing final syllable in Token 10 that is the problem although the phrase in which the word occurred is problematic (see section 6.1.3. and 6.1.5).

In Token 63, Speaker six pronounced "youth" as /juːθ/ in the phrase "*this is especially so of a very idealistic youth"* (see Appendix no). Here, the final sound is pronounced with the reference accent [θ]. Even though this is the way the word is pronounced in Received Pronunciation, this still caused intelligibility breakdown for 35 listeners who responded as follows:

Listener responses:

(1) …of a very idealistic use	(31 listeners)
(2) …of a very idealistic???	(4 listeners)

As shown in the above responses, 4 listeners[138] did not write anything for the word as they did not understand the pronunciation. 31 listeners[139] perceived "use" [ju:z] which implies that the final consonant caused the issue. This is a clear

[138] (1 Nepalese, 1 Iranian, 2 Polish)

[139] (7 Indians, 4 Ghanaians, 1 Korean, 2 Saudi Arabian, 5 Norwegians, 4 Malawian, 1 Singaporean, 3 German, 4 Spanish)

example in which imitating Inner-Circle pronunciation is not necessarily an advantage. However, a word of caution is appropriate here: this is the only case of intelligibility breakdown involving [θ]. So, the intelligibility breakdown, in this case, could be due to the effect of noise. Further research will be useful to determine if this is a case of breakdown.

In token 41, speaker four pronounced the expression *at times* [æt taɪmz] as [æʔ taɪmz] in the phrase "… and when I sit down at times, some things just cross my mind". This pronunciation of the word *at times* shows that there is a glottal + [t] sequence. This caused intelligibility breakdown for 56 listeners whose interpretations are as follows:

	Listener response	NOL	ORP	ORA	SA	CA	SC	NR
1	but when I sit down *sometimes*	3 listeners		✓	✓		✓	
2	but when I sit down *outside*	49 listeners		✓	✓	✓	✓	
3	but when I sit down *beside*	1 listener			✓		✓	
4	but when I sit down *on the side*	1 listener			✓			
5	but when I sit down *on sites*	1 listener						
6	but when I sit down *I sign*	1 listener						

Three listeners[140] interpreted "at times" as "sometimes" which reveal that they heard the second word "times" but the word "at" was misheard. 49 listeners[141] interpreted the word *at times* as "outside". This response shows preservation of

[140] (Norwegian, American and British)

[141] (12 British, 2 Americans, 5 Spanish, 4 German, 4 Indian, 3 Norwegian, 2 Russian, 2 Chinese, 1 Thai, 1 Singaporean, 2 Italians, 1 Austrian, 2 Polish, 1 Nepalese, 1 Brazilian, 2 Malawians, 2 French, 1 Korean and 1 Greek)

the glottal + t sequence. It would appear that these listeners have actually tried to adopt a probability approach. It could be an indication that they have relied on the context and come up with a word that makes sense. The speaker seems to be using the phrase “at times” almost as an aside, and it does not quite fit with the context because one would expect the phrase“sit down outside” to be far more likely in this context than “at times”. Also, the very fact that the vowel [a] occurs in the first syllable of “outside” seemed to reinforce that option as a choice for listeners. Other responses such as “on the side”, “beside”, “on sites” may suggest that they do not know the pronunciation of the word but have used syntactic clues to choose a word that is syntactically correct and semantically appropriate.

In the remaining tokens (see Table 6.12), the problem is straightforward: the listeners are not familiar with the word and context. I will elaborate on a few of them. For Token 20-22, we need to consider the wider context, which is shown in Extract 6.31.

> *Extract 6.31*
> *Context*: In other words, when we talk about culture for instance/hmmm cultural dialogue we don’t ask ourselves/is this a kind of **exterior** [ɪkˈstɪə riər] **directed** [dɪˈrektɪd] dialogue/ eh for the promotion of which we are neglecting the **interior** /ɪnˈtɪəriər/ dialogue/ that should take place among nations... (Speaker two unit 13-17)

In the extract above, speaker two, who is a member of the High-Level Panel on peace and dialogue among cultures, established in 2010 by UNESCO's Director-General, is addressing the members of the Panel. Even though his pronunciation of “exterior”, “directed” and “interior” was perfectly standard, this still caused intelligibility breakdown for my listeners as shown in Table 6.12. So, which factor

is causing the problem? Here, it is assumed that this speaker in his speech used words which the listeners simply do not know. For example, in the component of the British National Corpus (BNC), a 100 million corpus, the word “exterior”, “directed” and “interior” appears 661, 3418 and 2990 times respectively. The Corpus also reveals that these words were used more in meetings, education, law and political settings and used less often in spoken social interactions. Similarly, in the VOICE Corpus, “exterior” did not occur in the 1-million-word international Corpus while “directed” and “interior” appeared seven and four times respectively. Based on the frequency of these words it appears that my listeners were not expecting this word because they were not familiar with the word/context. Apart from the unfamiliar lexis or usage, it could also be that the context in which the words occurred is difficult. Since the words used by the speaker were directed at UNESCO members, it is quite likely that the context appears to be unfamiliar to my participants who listened to the excerpts. So, we might classify this as a lexical and context issue. But this is just a speculation.

6.4. Chapter Summary.

This chapter investigated evidence of segmental features that seem to have obstructed intelligibility in the speech of Nigerian speakers of English. The analysis was based on intelligibility breakdown that occurred in the speech of Nigerian speakers when international listeners listened to Nigerian speakers. The intelligibility breakdown was then investigated in terms of the segmental features that may have contributed to identify intelligibility problems. Although my aim in the study was to identify segmental features, there were also other factors (e.g. context, word frequency, prosodic features such as stress) that I draw attention

to in my discussion because they often contribute to the intelligibility breakdown and it was, therefore, essential to consider them. The following were some of the important findings in this chapter:

The findings indicate that the biggest issue for international listeners (non-Nigerian speakers) seems to be the alternatives to central vowels [ɜ:], [ə] and [ʌ]. There were eight tokens of intelligibility breakdown when a vowel variant was used where many users of English would use the mid-central vowel [ɜ:]; ten tokens when a distinct pronunciation was used where users of English would use [ʌ] and nine tokens when a variant was used where many speakers of English would use [ə].

In addition to central vowels, the alternative to centralised front lax vowel [ɪ] also caused problems for listeners. There were eight tokens in which the lax vowel [ɪ] appeared to be a substantial factor in causing the intelligibility breakdown. This problem could also be because [ɪ] vowel is not part of Nigerian English and Yoruba phonemic system.

Apart from the quality of a vowel, I also found that there were fourteen tokens in which the length of vowels contributed to intelligibility breakdown. Most of the time, the speakers in my study did not maintain the distinction between long and short vowels. The findings also demonstrate that using a short monophthong [e] rather than a diphthong [eɪ] can be critical to intelligibility but the use of long monophthong [e:] where the reference accent would be diphthong [eɪ] did not appear to cause intelligibility breakdown.

The non-realisation of a glottal fricative [h], a velar plosive [k], and a dark (velarized) [l], or [ɬ] contributed significantly to the occurrence of intelligibility breakdown. There is only one case in my data where a variant lacking the voiceless velar plosive [k] was used. This case may be due to the effect of “noise” or it could be due to the speaker’s production error. More research is needed to determine whether a distinct pronunciation lacking a velar plosive [k] is the cause of intelligibility breakdown or not in this case.

The findings also indicate that voiceless palato-alveolar affricate [tʃ] pronounced as voiceless palato-alveolar fricative [ʃ], voiced palato-alveolar fricative [ʒ] as voiceless palato-alveolar fricative [ʃ] and voiced alveolar fricative [z] as voiceless alveolar fricative [s] contributed to the occurrence of intelligibility problems. It is worth noting that I found only one token of intelligibility breakdown involving an alternative realisation to [z] and [ʒ]. This could be due to the effect or influence of “noise” or speaker’s production error for example. But further research should be conducted to find out whether these are cases of intelligibility problems or not. The findings also suggest that the alternatives to dental fricatives [θ], [ð], velar nasal [ŋ], and postvocalic [l] did not hamper intelligibility.

Finally, this study also found that consonant cluster simplifications caused problems except in cases where the elision follows the rule of L1 simplification. There were six tokens of intelligibility breakdown that resulted from simplifying consonant clusters. Out of the six tokens, one token was due to simplifying word-

initial consonant cluster, while the remaining five were due to simplifying final consonant cluster.

Having discussed the segmental features that caused intelligibility breakdown for international listeners, the following chapter examines data from Nigeria to access how intelligible Nigerian speakers of English are to Nigerian listeners.

Chapter Seven:
Findings and Discussion II:

Segmental Features Affecting Intelligibility of Nigerian Speakers of English to Nigerian Listeners

7.0 Introduction:

The previous chapter described segmental features that obstructed intelligibility when international listeners listened to Nigerian speakers. The present chapter discusses the segmental features of pronunciation that caused intelligibility breakdown among 50 Nigerians (25 Yoruba and 25 Hausa) who listened to the same five Nigerian Speakers of English used in part 1 of the study. Even though it is important to ensure that Nigerian English is intelligible to other speakers of English from different L1 backgrounds, it is worth noting that the majority of Nigerians are most likely going to use English language for intranational communication among its people of different ethnic groups. Therefore, it is crucial that Nigerian speakers of English are intelligible within Nigeria. In doing so, this work responds directly to the call for this type of research by Tiffen, (1974); Bamgbose, (1998); and Ufomata, (2015).

As discussed in chapter four, many earlier studies (Smith & Rafiqzad, 1979, Smith & Bisazza, 1982, Gass & Varonis, 1984, Smith, 1992, Bradlow, Nygaard & Pisoni, 1999; Goldinger, 1996; Imai et al., 2005) argue that speakers from a particular L1 background might have an advantage in understanding accented utterances from speakers who share that background. On the other hand, other studies (Hayes-Harb et al., 2008; Munro et al. 2006; Chia and Brown, 2002; Van Wijngaarden 2002a) have shown that misunderstanding can occur between

speakers from the same L1 background. Given the linguistic diversity of Nigeria (as discussed in chapter three), it is vital to test out the intelligibility of Nigerian speakers with other Nigerians. Can they understand one another and, if not, are the causes of breakdowns the same as those of the international listeners reported in Chapter 6 of the study?

7.1. Data Analysis: Vowels Affecting Intelligibility of Nigerian Speakers of English to Nigerian Listeners

In this section, I discuss the extent to which vowels caused intelligibility breakdown for Nigerian listeners. The table provided below presents an overview of each of the vowels that I have identified, alongside the number of instances of intelligibility breakdown associated with each.

Table 7.1: Vowels causing intelligibility breakdown

Phonological Factor	**Tokens**	**Instances of intelligibility breakdown to Nigerian listeners**
Mid-central vowel [ɜ:]	(universalism)	24
	(early)	4
	(certain)	3
	(introvert)	2
	(work)	3
	(work)	4
	(burden)	4
	(person)	3
Mid-central vowel [ə]	(moral)	2
	(moral)	0
	(total)	4
	(critical)	21
	(revenue)	0
	(interest rate)	0
	(certain)	3
	(deepen)	6
	(our commodities)	0
Open-mid central vowel [ʌ]	(other)	0
	(nothing)	0
	(must)	0
	(Sundays)	1
	(money)	0
	(among)	0
	(must be)	0
	(budgeting)	14
	(agriculture)	0
	(buck)	0
short lax (lowered-centralized) vowel [ɪ]	(marriage)	0
	(establish)	0
	(enabling)	13

	(enlargement)	18
	(respected)	0
	(skilled)	0
	(skilled)	0
	(living)	0

7.1.1 Mid Central Vowel /ɜː /

Table: 7.2. The mid-central vowel [ɜː]

	Speaker	Word	Pronunciation	Instances of Breakdown
1	One	work	[ˈwɔː k]	3
2	Two	universalism	[juːnɪˈva sᵊlɪzᵊm]	24
3	Three	early	[ˈaleɪ]	4
4	Three	certain	[ˈsatɪn]	3
5	Four	introvert	[ˈɪntrəvat]	2
6	Four	person	[ˈpɛːsɪn]	3
7	Four	work	[ˈwɔːk]	4
8	Five	service	[ˈsavɪs]	0
9	Five	network	[ˈnetwɔːk]	0
10	Five	service	[ˈsavɪs]	0
11	Six	burden	[ˈbɔːdᵊn]	4

It can be inferred from the table above that the mid-central vowel [ɜː] rarely pose intelligibility problems when Nigerian listeners listened to Nigerian speakers. There were eleven examples in which the mid-central vowel was realised by variant [a], [ɔː] and [ɛː] in “work”, “early”, “universalism”, “certain”, “person” etc. However, only one instance caused intelligibility breakdown for more than 20% of the Nigerian listeners. I analyse this single case of intelligibility breakdown in more detail.

In example (2) (see table 7.2), Speaker two pronounced the mid-central vowel /ɜː/ in the third syllable of universalism as front quality [a], he pronounced [juːnɪˈva

sᵊlɪzᵊm] instead of [juːnɪˈvɜːsᵊlɪzᵊm] in the phrase "… that moral height or even cultural universalism" (Speaker two unit 6). The word caused intelligibility breakdown for 24 Nigerian listeners (22 Hausa listeners and 2 Yoruba) who responded as follows:

Listeners' responses

(1) or even cultural?????? (8 Hausa and 2 Yoruba listeners)
(2) or even cultural *realism* (2 Hausa listeners)
(3) or even cultural *ritualism* (1 Hausa listener)
(4) or even cultural *ibinisalism* (1 Hausa listeners)
(5) or even cultural *individualism* (4 Hausa listeners)
(6) or even cultural *introsalism* (1 Hausa listener)
(7) or even cultural *idealism* (2 Hausa listeners)
(8) or even cultural *industrialism* (1 Hausa listener)
(9) or even cultural *evensalism* (1 Hausa listener)
(10) or even cultural *salism* (1 Hausa listener)

As observed from the listeners' transcription above, ten listeners did not understand universalism as they did not write anything. 14 Hausa listeners came up with different suggestions such as "realism", "ritualism", "individualism", "industrialism", "idealism", "introsalism", "ibinisalism" which did not make sense or fit the context of the utterance. Their responses reveal that they recognised the last two syllables of *universalism* ("-lism") which indicate these posed no challenges. The resulting question is what the cause of the problem is. Could it be due to the realisation of the mid-central vowel /ɜː/ as variant [a] or the word frequency? From my observation, the alternative to /ɜː/ is unlikely to be the cause of the problem; this is because there have been ten other instances where a vowel variant was used and these usages did not result in intelligibility breakdown for Nigerian listeners as shown in Table 7.2. We can also observe that the same vowel variant [a] used for the mid-central vowel /ɜː/ in "universalism" is also used

for /ɜ: / in “early”, “certain” and “introvert”. Less than 5% of Nigerian listeners had problems recognising it; this is an indication that the alternatives to the reference accent /ɜ:/ is not responsible for the problem encountered by these listeners.

A critical look at some of the listeners responses suggests that many listeners are trying to work out what they heard around the frame of “cultural”. So, responses such as “idealism”, “ritualism”, and “realism” may demonstrate that listeners have chosen words that are semantically appropriate but not contextually appropriate. These words do not fit the broader context in which “universalism” occurred. It may be that the contextual background in which the speaker used the word is difficult.

It could also be that the word “universalism” seemed unfamiliar to them being a low-frequency word (Deterding and Mohamad 2016; Haley & Jacks 2014; Deterding, 2013; Becker 2013). In the component of the British National Corpus (BNC), a 100 million corpus, the word “universalism” appeared twice in the spoken domain and 35 times in all other domains. The Corpus also reveals that “universalism” was used more in academic settings and used less often in spoken social interactions. Similarly, in the Vienna- Oxford International Corpus of English (VOICE hereafter), the word “universalism” did not occur in the 1-million-word corpus, but “universal” appeared four times. Based on the frequency of this word “universalism”, it appears the cause of intelligibility breakdown is likely to be the lexis as well as word frequency, context and not mid-central vowel /ɜ: /.

In conclusion, the findings show that Nigerian listeners did not have significant problems with the alternatives to the reference accent /ɜ: / as given in Table 7.2. This could be because they are familiar with the accent. This conclusion echoes the research of Smith and Rafiqzad (1979); Smith & Bisazza (1987), and Imai et al (2005), in which it was observed that the greater the familiarity a "non-native speaker" or a listener has with a variety of English, the more likely he/she will understand that variety.

7.1.2 Mid Central Vowel /ə/ (Schwa)

There were ten examples in which the mid-central vowel [ə] (schwa) was realised by a distinct vowel quality or pronunciation. The table given below shows the extent to which these variants hindered intelligibility among 50 Nigerian listeners who listened to the Nigerian speakers.

Table: 7.3. The number of intelligibility breakdown involving [ə] vowel

	Speaker	**Word/text**	**Pronunciation**	**Instances of Breakdown**
1	Two	moral	[ˈmɒra]	2
2	Two	moral	[ˈmɒra]	0
3	Five	total	[ˈto:ta]	4
4	Five	critical	[krɪ ɾɪˈkɑ]	21
5	Three	revenue	[rɛvɛˈnju:]	0
6	Three	interest rate	[ɪnˈtrɛst ˈreɪt]	0
7	Three	certain	[ˈsatɪn]	3
8	Five	deepen	[dipɪn]	6
9	Three	our commodities	[ɑ:ˈkɒ mɒditiz]	0
10	Five	capital	[ˈkæpɪta]	0

In case (4), Speaker five pronounced "critical" /ˈkrɪtɪkᵊl/ as [krɪ ɾɪˈkɑ]. Here, the vowel variant [a] is used in the final syllable of "critical" and we can observe a different stress pattern (the stress is on the final syllable). In addition to this, the alveolar plosive [t] sound in the second syllable was pronounced as an alveolar

tap [ɾ], and there is no [l] in the coda of the final syllable. The pronunciation of the word *critical* caused intelligibility problems for 21 listeners who responded as follows:

Listeners responses:

(1) capacity building is *credit card* (2 Yoruba & 7 Hausa listeners)
(2) capacity building is *green card* (3 Hausa listeners)
(3) capacity building is?????? (4 Hausa & 2 Yoruba listeners)
(4) capacity building is *card* (3 Hausa listeners)

Examining the data, six listeners (4 Hausa and 2 Yoruba) left a blank slot suggesting that the word was unintelligible to them. The fact that the majority of listeners who failed to understand “critical” heard it as “card” may suggest that the problem lies in the last syllable of “critical”. However response such as “credit card” may perhaps demonstrate that their attention was primarily focused on the alveolar tap [ɾ] in the second syllable and the full vowel [ɑ] on the final syllable.

The issue, in this case, was deciding what the main cause of intelligibility breakdown was. Some explanations seem plausible for the cause of the breakdown. Could it be the vowel quality [a] used in the final syllable of “critical”; the stress placement or the alveolar tap [ɾ] used in the second syllable or the absence of [l] in the coda of the final syllable? My analysis suggests that the use of alveolar tap [ɾ] in the second syllable may be the cause of intelligibility breakdown in this case while the realisation of /ə/ as [a]; the non-realisation of [l] and the difference in stress pattern may be contributory factors.

One explanation for this is that on two occasions, one of the Nigerian speakers (Speaker six) pronounced the alveolar plosive [t] in the second syllable of “title” for a tap [ɾ]. These variants affected his intelligibility to Nigerian listeners (see Section 7.1.5). This result is consistent with Jenkins (2000) who argues that an alveolar tap or voiced flap [ɾ] has potential to confuse listeners because it is closer to /d/ rather than /t/. The second explanation is that the alternatives to the reference accent /ə/ and the non-realisation of [l] did not cause issues for Nigerian listeners somewhere else in the study.

The section that follows considers the extent to which [ʌ] vowel hindered intelligibility among Nigerian listeners.

7.1.3. The Central Half-Open Short Lax Vowel [ʌ]

There were ten cases in which the referent sound [ʌ] was realised by a distinct vowel but only one single case, as shown in Table 7.4, caused a problem for more than 20% of the Nigerian listeners. I will discuss this case in more detail.

Table: 7.4. Intelligibility breakdown involving [ʌ] vowel

	Speaker	**Word**	**Pronunciation**	**Instances of Breakdown**
1	One	other	[ɔðə]	0
2	One	nothing	[ˈnɔtɪŋ]	0
3	One	must	[mɔːs]	0
4	One	sunday	[sɔ̃ndiz]	1
5	One	money	[ˈmɔni]	0
6	Two	among	[əˈmɔŋ]	0
7	Three	must be	[mɔ bi]	0
8	Five	budgeting	[bɔˈdʒɛtɪŋ]	14
9	Five	agriculture	[ˈaːgrɪkɔːtʃəˈ]	0
10	Six	buck	[ˈbɒk]	0

Speaker five pronounced “budgeting” /ˈbʌdʒɪtɪŋ/ as [bɔˈdʒɛtɪŋ] in the given extract

> *Extract 7.1.*
> *Context:* /…Well, I think that the biggest achievement for 2012/ has been our ability to consolidate on the gains/that we have made in the past/ to deepen access of our people to services, /road networks, health care, education, opportunities for jobs /and to continue to reinforce the importance /of **budgeting** [bɔˈdʒɛtɪŋ] in a constitutional democracy/… (Speaker five, unit 1-7)

The vowel in the initial syllable is pronounced with a back vowel [ɔ] while there is a different stress placement from the first syllable to the second syllable. The word *budgeting* ([bɔˈdʒɛtɪŋ] as pronounced by the speaker) was problematic for 14 listeners whose responses are given below:

> Listeners’ responses:
>
> (1) of *board????* in a constitutional democracy (2 listeners)
> (2) of *projecting* in a constitutional democracy (4 listeners)
> (3) of???????? in a constitutional democracy (8 listeners)

In (1) and (2), two listeners (Hausas) and four listeners (3 Yoruba & 1 Hausa) interpreted *budgeting* as “board” and “projecting” respectively which demonstrates that these listeners may have been confused by the vowel quality in the first syllable. Eight listeners (2 Yoruba and 6 Hausa) did not write anything for the word which suggests that they did not understand the word. What is the problem in this case? I will be reluctant to conclude that the vowel quality is the issue. This is because the central vowel [ʌ] posed no other intelligibility problems when realised by another vowel quality as indicated in Table 7.4. I perceive that

the context in which *budgeting* occurred probably did not provide sufficient information for the listeners to make sense of the word.

7.1.4. The Monophthong [ɪ]

Table: 7.5. The number of intelligibility breakdown involving [ɪ] vowel

	Speaker	**Word**	**Pronunciation**	**Instances of Breakdown**
1	One	marriage	[mæˈre:dʒ]	0
2	Three	establish	[eˈstablɪʃ]	0
3	Five	enabling	[eˈneɪblɪŋ]	13
4	Six	enlargement	[enˈlɑ:dʒmənt]	18
5	Three	respected	[riˈspek tɪd]	0
6	Five	skilled	[ski:d]	0
7	Five	skilled	[ski:d]	0
8	Five	living	[ˈli:vɪŋ]	0

As shown in the table above, there are eight cases in which the [ɪ] vowel was realised by another vowel quality, but only two examples caused intelligibility breakdown to Nigerian listeners. I shall discuss these two cases in detail.

In example one, Speaker five pronounced “enabling” /ɪˈneɪblɪŋ/ as [eˈneɪblɪŋ]. The vowel /ɪ/ in the first syllable of “enabling” is pronounced as close-mid front vowel [e]. This word caused problems for 13 listeners who responded as follows:

Listeners’ responses:

(1) but they were????? ????? (9 listeners)
(2) but they were independently ***...nably*** (1 listeners)
(3) but they were ***????*** *neighbourly* (3 listeners)

Looking at this case, the vowel quality in the first syllable is the only feature of pronunciation that contributed to the intelligibility failure. However, in this case, we need to consider the wider context, which is shown in Extract 7.2.

> *Extract:7.2.*
> *Context*: ….Yeah, our decision to focus on power/agriculture, transportation, and housing/ was in response to the feedback we were getting/the compelling needs to create jobs/beyond banking and telecoms/and we thought that/those sectors were not only interdependent /but they were independently **enabling** [ˈeneɪblɪŋ]/ (Speaker five, unit 9-16).

In this extract, speaker five, who is a politician, is chatting about the prospects his administration has for Lagos state (a city in Nigeria). We can observe that of the 13 listeners who had an issue with the word "enabling", twelve omitted the preceded word as shown in the listeners' responses. This demonstrates that the context in which "enabling" occurred is difficult[142], so it is perhaps not too surprising that these Nigerian listeners did not recognise the word. One might note that apart from two cases of intelligibility breakdown, the [ɪ] vowel posed no other problem when realised by another vowel quality as indicated in Table 6.9. Hence, the listeners' inability to understand "enabling" might be classified as lexical and context rather than phonological, and it seems that the alternative to the referent sound [ɪ] in the first syllable of "enabling" was a minor factor.

In case four (see table 7.5), speaker six pronounced "and enlargement" as [ən enˈlɑːdʒ mənt] in the phrase "*erm erm a weight of imposition, imposition, sense of additional duties; and enlargement of ones' constituency*" (see Appendix 7).

[142] The collocation (lexical) was perhaps not familiar.

Here, the vowel /ɪ/ in the initial syllable of “enlargement” is pronounced with [e] Cardinal 2. The word caused intelligibility problems for 18 Nigerian listeners (7 Yoruba and 11 Hausa) who wrote “alignment” instead of “and enlargement”. This response suggests they recognised the first vowel sound [ə] of the previous word “and” and missed the first syllable of “enlargement”. Their transcriptions also reveal that they recognised the last syllable (-ment) and part of the sounds in the second syllable. This suggests that the last syllables were not a problem but the first was.

A critical look at the remaining syllable shows that the cause of intelligibility breakdown may be the use of [e] cardinal two in the first syllable. This is because all the listeners who misunderstood “enlargement” missed the entire first syllable [en]. However, we need to be cautious here because apart from this case and the previous one, the [ɪ] vowel posed no other problem when realised by another vowel quality as indicated in Table 7.5. Hence, the listeners’ inability to understand “enlargement” might be classified as lexical and contextual rather than phonological, and it seems that the alternative to [ɪ] vowel in the first syllable of “enlargement” was a minor factor.

The rest of the vowels not mentioned here did not cause intelligibility breakdown to Nigerian listeners.

7.2. Consonants Affecting Intelligibility of Nigerian Speakers of English to Nigerian Listeners.

In this section, I discuss the consonants that led to intelligibility problems among the Nigerian listeners. The table provided below presents an overview of each of the consonant that I have identified, alongside the number of instances of intelligibility breakdown associated with each.

Table7.6 Consonants causing intelligibility breakdown to Nigerian Listeners

	Speaker	**Word**	**Pronunciation**	**Instances of Breakdown**
1	Five	health care	[helθ]	12
2	Six	youth	[ju:θ]	28
3	Five	critical	[krɪrɪˈkɑ]	21
4	Six	titles	[ˈtaɪrᵊl]	18
5	Six	title	[ˈtaɪrᵊl]	15

In example (1), speaker five pronounced “healthcare” as [ˈhelθˌkeər] in the phrase “…road networks, healthcare, education opportunities for jobs…” (Speaker five, see Appendix 7). The pronunciation caused intelligibility breakdown for twelve Hausa listeners. Out of the twelve listeners, eight left the word blank as they did not understand the word while four listeners came up with “help” in place of “health”.

Similarly, speaker six pronounced the word “youth” as [ju:θ] in “this is especially so of a very idealistic youth”. This pronunciation of “youth” caused intelligibility problems for 28 listeners. 24 of the listeners wrote “use” ([ju:s]). This response suggests that the last consonant is the issue. All the 24 listeners who wrote “use” instead of “youth” were Hausas. This can partly be explained by the fact that in Nigeria, English speakers with Hausa as L1 do not use the dental fricative [θ]. They often realise the sound as an alveolar fricative [s] (Adetugbo, 2009;

Awonusi, 2004; Jibril, 1982). The remaining four listeners (1 Hausa and 3 Yoruba) left the word blank which may suggest that they do not know the pronunciation of the word. We can observe that these two speakers have used the referent accent (Received Pronunciation) and one would expect these four Nigerian listeners to recognise RP since it is taught in schools, but it is surprising that this caused intelligibility breakdown. However, it must be noted that most of the time, the Nigerian speakers in my study pronounced the voiced dental fricative /θ/ as alveolar plosive [t] (Eka, 1985; Odumuh 1987; Banjo, 1971; Jibril, 1982; 1986; Jowitt, 1991; Simo Bobda, 1995; 2007; Udofot, 2007; Adetugbo, 2009). For example, “things” was realised as [tins], “everything” as [ˈevritɪn], “somethings” as [ˈsʌmtɪnz], “thought” as [tɔːt], “think” as [tɪnk], “growth” as [grəʊt] (see Appendix). But these usages did not hamper their intelligibility.

These two examples (health care [ˈhelθˌkeər] and youth [ju:θ]) are clear examples in which imitating inner circle pronunciation may not be the best way of speaking in a non-native environment.

The next consonant that affected the intelligibility of Nigerian speakers to Nigerian listeners is the use of an alveolar tap [ɾ] as seen in the following cases.

In case 3 (see Table 7.6), the use of alveolar tap [ɾ] in the coda of the first syllable of “critical” cause intelligibility breakdown (see Section 7.1.2). In case 4 and 5 (see Table 7.6), speaker six pronounced the second alveolar plosive [t] in “title” with an alveolar tap [ɾ] on two occasions as shown in the following extract:

> Extract:7.3
> Context: The first thing is that I hate **titles** [ˈtaɪrᵊlz] / I really do. /And then er when such a **title** [ˈtaɪrᵊl] er carries with it er, / a weight of imposition, imposition, sense of additional duties; /and enlargement

> of ones' constituency/yes it becomes very much a burden/and the only way I cope with it/is just to ignore that **title** [ˈtaɪtᵊl] completely…. (Speaker six)

The pronunciation of the first occurrence of "title(s)" in this extract caused intelligibility breakdown for 18 listeners (16 Hausa and 2 Yoruba). Of the 18 listeners, eleven did not understand the word and did not provide any written clue. The remaining seven listeners wrote, "The first thing is that I hate ties". Their transcription of "titles" as "tie" reveals that they recognised the first syllable of "titles" but omitted the final syllable. This implies that the alveolar tap could be the cause of the problem for these listeners.

As the speaker progresses in his discussion, he repeats his pronunciation of title as [ˈtaɪrᵊl] in the phrase "and when such a title carries with it…". This pronunciation caused intelligibility breakdown for 15 Hausa listeners. Of the 15 listeners, two did not write anything for the word. Nine wrote, "tie" (which is phonetically transcribed as [ˈtaɪ]) for "title" while four wrote, "tithe" (which is phonetically transcribed as [taɪð]). These responses imply that the use of an alveolar tap or voiced flap is the cause of intelligibility problem.

It should be noted that the word *title* occurred the third time in speaker six's speech (see extract 7.3) but this time it was pronounced as [ˈtaɪtᵊl] in "*…is just to ignore that title*". This pronunciation did not appear to cause any intelligibility problems for listeners as they all found the word intelligible. This further supports the findings that it was the alveolar tap that caused the intelligibility breakdown.

7.3. Chapter Summary

The analysis was based on intelligibility breakdown that occurred in the speech of Nigerian speakers when Nigerian listeners listened to them. My aim also in this chapter was to examine whether the segmental features that caused intelligibility problems for international listeners (as discussed in chapter six) also caused intelligibility breakdown for Nigerian listeners. In doing this, the chapter also considered instances which did not cause intelligibility breakdown for international listeners, but which hindered intelligibility for Nigerian listeners. The following were some of the important findings in this chapter:

- The results indicate that the alternatives to central vowels [ʌ], [ɜ:], and [ə] seldom causes problems for listeners. Most of the problems were attributed to unfamiliar word and context.
- The difference in the length of vowels did not cause intelligibility breakdown.
- The non-realisation of consonants did not contribute to the occurrence of intelligibility breakdown.
- The findings also indicate that the difference in the production of consonants did not contribute to the occurrence of intelligibility problems except the use of alveolar tap [ɾ] where the referent sound would be plosive [t].
- The pronunciation of voiced dental fricative [θ] caused intelligibility failure for Hausa listeners, but the use of consonant variant [t] for [θ] did not hamper intelligibility.

Chapter Eight
Conclusion and Implications

8.1 Introduction:

This chapter draws together the various findings of my research work on pronunciation intelligibility of Nigerian speakers of English. The first part of the chapter begins with a summary and discussion of the key findings according to the research questions posited in section 1.2. Next, is a discussion on the implications of the findings of this study for the teaching of pronunciation practice (particularly in Nigeria). This is followed by the contribution of the thesis to knowledge. Finally, the chapter outlines the limitations of my work and consequent directions for further research.

8.2 Overview of the Findings.

The following section is a summary of the findings of this study according to the research question outlined in section 1.2.

8.2.1 Research Question

The Research question asked what segmental features of pronunciation used by Nigerian speakers of English affect intelligibility. This question was discussed in chapter 6 and 7. I looked at this research question from two perspectives. First, what segmental features used by Nigerian speakers of English affect their intelligibility to international listeners made up of non-Nigerian speakers of English? Second, what segmental features used by Nigerian speakers affect their intelligibility to Nigerian listeners? Unlike previous studies (Tiffen 1974) that concentrated on assessing the intelligibility of Nigerian speakers to Native

English speakers only, I took a step further to investigate the intelligibility of Nigerian speakers as determined by speakers of English from different L1 backgrounds including speakers of the dominant languages in Nigeria. A summary of the main findings is given below.

8.2.2. The Main Findings

The following table indicates some of the important findings of the study in terms of the levels of problematicity of the pronunciation features analysed:

Phonological Factor	**Tokens**	**Instances of intelligibility breakdown to ILs**	**Percentage**
Mid-central vowel [ɜ:]	19 (universalism)	64	64%
	26 (early)	78	78%
	36 (certain)	86	86%
	42 (introvert)	50	50%
	5 (work)	24	24%
	46 (work)	29	29%
	62 (burden)	42	42%
	43 (person)	22	22%
Mid-central vowel [ə]	17(moral)	24	24%
	18 (moral)	32	32%
	54 (total)	29	29%
	56 (critical)	38	38%
	29 (revenue)	43	43%
	33 (interest rate)	32	32%
	36 (certain)	86	86%
	47 (deepen)	36	36%
	37 (our commodities)	33	33%
Open-mid central vowel [ʌ]	2 (other)	32	32%
	3 (nothing)	65	65%
	7 (must)	29	29%
	8 (Sundays)	30	30%
	11 (money)	26	26%
	23 (among)	25	25%
	30 (must be)	48	48%
	48 (budgeting)	43	43%
	50 (agriculture)	31	31%

	64 (buck)	50	50%
short lax (lowered close-centralized front) vowel [ɪ]	6 (marriage)	41	41%
	24 (establish)	30	30%
	53 (enabling)	34	34%
	60 (enlargement)	79	79%
	31 (respected)	31	31%
	57 (skilled)	46	46%
	58 (skilled)	32	32%
	59 (living)	60	60%
Vowel length	1 (any)	36	36%
	4 (lead)	41	41%
	13 (keep)	22	22%
	25 (strategic)	28	28%
	28 (reasonable)	37	37%
	32 (reasonable)	35	35%
	47 (deepen)	36	36%
	57 (skilled)	46	46%
	58 (skilled)	38	38%
	59 (living)	60	60%
	19 (universalism)	64	64%
	26 (early)	78	78%
	36 (certain)	86	86%
	42 (introvert)	50	50%
	12 (fame)	43	43%
	14 (straight)	32	32%
	40 (way)	26	26%
	41 (go)	37	37%
Non-realisation of consonants			
[h]	16 (high)	40	40%
	51 (housing)	35	35%
	38 (enhance)	36	36%
[k]	39 (acting)	32	32%
[l]	17 (moral)	24	24%
	18 (moral)	39	39%
	49 (tool)	47	47%
	50 (agriculture)	31	31%
	54 (total)	29	29%
	56 (critical)	38	38%
Consonant cluster simplification			
initial cluster	15 (humility)	43	43%
final cluster	30 (must be)	48	48%
	45 (midst)	31	31%
	52 (needs)	29	29%
	57 (skilled)	46	46%
	58 (skilled)	38	38%
Differences in consonant realisations			
[tʃ]	27 (mutual)	37	37%
	35 (mutual)	34	34%

[z]	34 (as)	44	44%
[ʒ]	55 (measure)	31	31%

The findings indicate that the biggest issue for international listeners (non-Nigerian speakers) seems to be the alternatives to central vowels [ʌ], [ɜ:], and [ə]. There were eight tokens of intelligibility breakdown when a vowel variant was used where many users of English would use the mid-central vowel [ɜ:]; ten tokens when a distinct pronunciation was used where users of English would use [ʌ] and nine tokens when a variant was used where many speakers of English would use [ə].

In addition to central vowels, the alternative to centralised front lax vowel [ɪ] also caused problems. There were eight tokens in which the lax vowel [ɪ] appeared to be a substantial factor in causing intelligibility breakdown for international listeners.

Apart from the quality of vowels, I also found that there were fourteen tokens in which the length of vowels contributed to intelligibility problems. This was also a finding in Jenkins (2000; 2002; 2007) and Zhang (2013). Most of the time, the Nigerian speakers in this present study did not maintain the distinction between long and short vowels. This may be related to the speakers' phonemic system, for instance Adetugbo (1987) observe that the high front vowels /i:/ and /ɪ/ are neutralized as [i] in Nigerian English, suggesting that the vowel quantity is midway between the long /i:/ and the retracted /ɪ/ of RP. The low front vowel /æ/ and the low back vowel /ɑ:/ are neutralized into [a] in many cases. Likewise, the high back vowels /ʊ/ and /u:/ mostly occur as [u] in Nigerian English. The mid-back vowels

/ɒ/ and /ɔ:/ are mostly realised as [ɔ]. The results also demonstrate that using a short monophthong [e] where many users of English would use a diphthong [eɪ] can be critical to intelligibility but the use of long monophthong [e:] did not appear to cause intelligibility breakdown.

The problems with consonants are the non-realisation of glottal fricative [h], and dark (velarized) [l], or [ɬ]. These contributed substantially to the occurrence of intelligibility breakdown with international listeners. Deterding (2013) in his study also found that not using these consonants caused a communication problem. In addition, the potential non-use of voiceless velar plosive [k] in “acting” also caused intelligibility breakdown in my study, but one needs to be cautious here because there was only one case in my data where a variant lacking the voiceless velar plosive [k] was used. As mentioned in chapter six, this single case may be due to the effect of noise or it could be due to the speaker’s production error. More research should be done to determine whether a distinct pronunciation lacking a velar plosive [k] is the cause of intelligibility breakdown or not in this case.

Moreover, the realisation of voiceless palato-alveolar affricate [tʃ] as voiceless palato-alveolar fricative [ʃ]; voiced alveolar fricative [z] as its voiceless counterpart [s]; and a voiced palato-alveolar fricative [ʒ] as voiceless palato-alveolar fricative [ʃ] contributed to the occurrence of intelligibility problems. These sounds [tʃ, z, ʒ] would be difficult to reproduce because they are not part of the speakers’ L1 (Yoruba language) phonemic system. However, it is worth noting that I found only one token of intelligibility breakdown involving an alternative to

[z] and [ʒ] and only two tokens involving [tʃ]. This could be due to the effect or influence of noise or the speaker's production error for example. But further research should be conducted to determine whether these are cases of intelligibility problems or not. The findings also suggest that the alternative realisations of the dental fricatives /θ/, /ð/, velar nasal [ŋ], and postvocalic /l/ did not hamper intelligibility. These findings relate to those of earlier studies (Deterding, 2014; Jenkins, 2000).

Furthermore, this study also found that consonant cluster simplifications caused problems except in cases where the elision follows the rule of L1 simplification. There were six tokens of intelligibility breakdown that resulted from simplifying consonant clusters. Out of the six tokens, one token was due to simplifying word-initial consonant cluster; the remaining five were due to simplifying final consonant cluster.

Finally, as far as Nigerian listeners are concerned, the following table indicates some of the important findings.

Table 8.2

Phonological Factor	**Tokens**	**Instances of intelligibility breakdown to Nigerian listeners**	**Percentage**
Mid-central vowel [ɜ:]	(universalism)	24	48%
	(early)	4	8%
	(certain)	3	6%
	(introvert)	2	4%
	(work)	3	6%
	(work)	4	8%
	(burden)	4	8%
	(person)	3	6%
Mid-central vowel [ə]	(moral)	2	4%
	(moral)	0	0%
	(total)	4	8%
	(critical)	21	42%

	(revenue)	0	0%
	(interest rate)	0	0%
	(certain)	3	6%
	(deepen)	6	12%
	(our commodities)	0	0%
Open-mid central vowel [ʌ]	(other)	0	0%
	(nothing)	0	0%
	(must)	0	0%
	(Sundays)	1	2%
	(money)	0	0%
	(among)	0	0%
	(must be)	0	0%
	(budgeting)	14	28%
	(agriculture)	0	0%
	(buck)	0	0%
short lax (lowered-centralized) vowel [ɪ]	(marriage)	0	0%
	(establish)	0	0%
	(enabling)	13	26%
	(enlargement)	18	36%
	(respected)	0	0%
	(skilled)	0	0%
	(skilled)	0	0%
	(living)	0	0%

Table 8.3. Consonants causing intelligibility breakdown to Nigerian Listeners

	Word	**Pronunciation**	**Instances of Breakdown**	**Percentage**
1	health care	[helθ]	12	24%
2	youth	[juːθ]	28	56%
3	critical	[krɪrɪˈkɑ]	21	42%
4	titles	[ˈtaɪrᵊl]	18	36%
5	title	[ˈtaɪrᵊl]	15	30%

The results revealed that when Nigerian listeners (25 Yoruba and 25 Hausa) listened to Nigerian speakers, the alternative realisations to central vowels [ʌ], [ɜː], and [ə] was not a problem for them except in few cases which could be attributed to lexical usage and context. The difference in the length of vowels, the non-realisation of consonants and cluster simplification did not hinder intelligibility. The findings also indicated that the differences in the production of consonants did not contribute to the occurrence of intelligibility problems except for the realisation of alveolar plosive [t] as tap [ɾ].

All these findings given above raise some questions in our minds: What are the implications of this outcome to the teaching/learning of English in Nigeria? And what are the implications of these results on general attitudes towards the variety used in Nigeria?

8.3 Pedagogical Implications

This section looks at the implications that can be drawn from this present study. Looking at the results of this study, it is clear that some features of the pronunciation of English by speakers from Nigeria are more important for international intelligibility than others. Specifically, the central vowels [ɜ:], [ʌ], [ə] and [ɪ], distinction between long and short vowels, consonant clusters, the glottal fricative sound [h], dark (velarized) [l], or [ɬ], the voiceless palato-alveolar affricate [tʃ]; the voiced alveolar fricative [z]; and the voiced palato-alveolar fricative [ʒ] are features of pronunciation English teachers in Nigeria should work on in their teaching; but there is less need to pay attention to dental fricatives /θ/, /ð/, velar nasal [ŋ], and postvocalic [l] "substitutions" such as L vocalisation. For example, in my study, the use of alveolar plosives [t], [d] for dental fricatives /θ/, /ð/ occurred 20 times; postvocalic [l] as [ʊ] occurred 5 times and the realisation of velar nasal [ŋ] as alveolar nasal [n] appeared 15 times (Eka, 1985; Odumuh 1987; Banjo, 1971; Jibril, 1982; 1986; Jowitt, 1991; Simo Bobda, 1995; 2007; Udofot, 2007). But these variations did not cause phonological unintelligibility on a single occasion. This illustrates one point that there is no need always to use RP or "imitate" the pronunciation of the "ideal native speaker".

Another implication of my study is that it challenges the assumption that British English or American English is the only valid standard English. It also challenges the notion that “native speaker” is the norm that learners should aspire to have. Currently, in Nigeria, the model for teaching English pronunciation remains the Standard British English Pronunciation while Nigerian English is not considered as a possible source of classroom norms but as a substandard variety of British English by key stakeholders and teachers. Kirkpatrick (2010) argues that this privileging of British English gives advantage to “native speakers of English’ and disadvantage others.

But as discussed in Chapter 2, the two academic approaches which can be referred to as “WE” and “ELF” have proposed a paradigm shift in English language teaching (Jenkins, 2000; 2006; 2007; Kirkpatrick, 2006; 2010, Saraceni, 2010, Makay,2002) based on the following points: (1) non-native speakers of English outnumber native speakers; (2) native speakers of English can no longer claim exclusive ownership of the language; (3) native varieties of English, British and American English do not represent relevant models for learners of English around the world; (4) the distinction between native and non-native speakers should be downplayed as irrelevant and unhelpful. Bamgbose (1998) and Saraceni (2009) observe that these points have been continuously insisted upon in the relevant literature, and up till now the volume of such academic attention does not seem to have had a tangible impact in actual classroom.

However, this present study provides a practical way in which English pronunciation should be taught in Nigeria. It argued that learners of English in the Nigerian context should not be expected to produce British English or American English accurately but be allowed to preserve their accent. Standard Nigerian English should be adopted as the model of English and the learning targets in Nigeria classrooms. This is because, as shown in Chapter 3 of this thesis, the major role of English within Nigeria is as a lingua franca. That is to say, English is used as a medium of communication among Nigerians of different ethnic groups. There are also other persons who will use it to communicate with other speakers of English. These learners of English therefore need to be able to use English successfully in such settings. The great majority of people learning English in Nigeria require a functional proficiency in English to be able to use it as a lingua franca within Nigeria and with other speakers of English. In such situations, the insistence on a British model from which to derive linguistic benchmarks and targets for learners needs to be questioned. English teaching in Nigeria should be measured against their ability to use English language in real contexts.

This study shows how important it is to rid the English pronunciation curriculum in Nigeria of the hegemonic language and models. English pronunciation teaching in Nigeria should acknowledge variation rather than deviance. Unlike previous studies, (e.g. Atoye, 1987; Amayo, 1988; Fakeye, 2017; Nkamigbo, 2015; Sotiloye, 2007), pronunciation features that are “different” from Inner Circle norms (RP in this case) were not referred to as “errors” or “deviations”, but as “differences” in this current study. This was reflected in the choice of language

used in presenting my analysis and findings (See Chapter six) where reference to hegemonic norms was removed wherever possible. In presenting the results, I realised that there was a tendency to echo the hegemonic language that researchers (e.g. Egwuogu 2012) and teachers often associate with Standard English such as RP. In moving away from this stance, I adopted, wherever possible, a more neutral non-judgmental language. For example, I used terminologies such as “distinct pronunciation”, “vowel and consonant variants”, “differences in vowel realisation” “alternatives to the reference accent”, instead of “vowel substitution or vowel mispronunciation”, “different stress pattern or L1 stress pattern” in place of “stress shift”, “differences in vowel length” rather than “lack of phonemic length distinction”, “non-realisation of consonant” rather than “consonant deletion”, “differences in consonant realisation” instead of “consonant substitution”. However, in some cases, it was not possible to maintain a neutral non-judgmental language. So, I reluctantly resorted to the hegemonic language commonly used by researchers as a convenient set of labels, and not a judgmental label. Further research is needed to develop the terminologies that can replace the hegemonic language.

8.4 Contributions of this Dissertation

This study contributes to scholarship because of its focus on the pronunciation intelligibility of Nigerian speakers not only to British listeners but to users of English from different L1, as well as two main Nigerian L1s. This responds to calls by Ufomata (1990a; 2015), who in her discussion on the need to recognise different mutually intelligible varieties of non-native speaker English (including Nigerian English) advised that ‘it would be essential to study the varieties which

have emerged in second language situations…' and secondly 'it would then be important to identify the areas which cause intelligibility failures within these accents' (1990:216). In the Nigerian context, considerable research has been carried out to describe the varieties of spoken Nigerian English that have emerged (e.g. Jibril, 1982; Bamgbose, 1982; Ufomata, 2015; Banjo, 1971; Awonusi, 2009; Udofot, 2004; 2007, and Bobda, 2007). However, to date, the intelligibility of Nigerian English has not been the focus of research. Tiffen's (1974) study is the only major large-scale work that has been carried out on the intelligibility of Nigerian speakers of English. But his study prioritises British listeners' as evaluators of Nigerian speakers of English probably because the study was carried out some decades ago. In other words, it has traditionally overlooked the way Nigerian English is perceived by other other speakers of English in international as well as intranational contexts. However, given the change in the use and users of English in the world today as mentioned earlier in Chapter 1 and 3, the current study has addressed this gap in the research by investigating the intelligibility of Nigerian speakers of English as determined by other speakers of English with different L1s, including two dominant Nigerian L1s (Bamgbose, 1998; Ufomata, 2015). The findings of the causes of intelligibility breakdown, thus, form an essential component of knowledge on the intelligibility of Nigerian speakers.

The second contribution of my research is an empirical one. As I have discussed in my methodology chapter, many of the past intelligibility studies have differed regarding the techniques used in eliciting non-native speech samples from speakers. For example, speech materials range from recording: word lists (as

used by Tiffen, 1974; Irvine, 1977; Suenobo, Kansaki & Yamane, 1992; Bent & Bradlow, 2003), sentences (as used in Osimk, 2009; Cunningham, 2012), passages (as used by Smith and Rafigzad, 1979; Smith and Bisazza, 1982; Suenobo, Kansaki & Yamane, 1992; Munro & Derwing, 1995; Major et al., 2002; Kashiwagi and Synder, 2006; 2010; Chen, 2011; Matsuura et al, 2012; Becker & Kluge, 2014); spontaneous speech (used in Bansal, 1966; Tiffen, 1974; Matsuura, Chiba and Fujieda, 1999; Munro, Derwing & Morton , 2006); interviews (used in Albrechtsen et al., 1980; Wang 1987; Deterding, 2005; Kirkpatrick et al., 2008); interactions (as used in Varonis & Gass, 1985a; Smith, 1992; Jenkins, 2000; Deterding and Kirkpatrick , 2006). The contextualization for the recordings also differs; for instance, in Smith and Bisazza's (1982) study, the passages are read by speakers of different L1s (i.e. readers/speakers are from Hong Kong, India, the Philippines, Japan Taiwan, Thailand and Hawaii) and Dayag's (2007) investigation of the intelligibility of Philippine English is based on spontaneous speeches and reading of passages and word lists by Filipinos. For stimulus recordings, Kirkpatrick et al. (2008, p.362) use interviews of "well-educated" speakers of English from Hong Kong.

But, from all we know about sociolinguistics research, the recording technique and the presence of an authority figure (the researcher in most cases) are very likely to encourage "attention paid to speech" (Labov 1972) which might cause the subjects or speakers to adjust their speech in the direction of greater formality and "correctness", which may affect precisely the phenomenon under investigation. Therefore, to minimize researcher intrusion, via observation and recording, in the whole process, the present study uses recordings of speakers

on television and radio programmes (broadcast material or podcasts) meant for general consumption which is not a scripted speech and that takes place in a genuine communicative context rather than speech samples elicited and recorded by the researcher. To the best of my knowledge, Van der Walt, (2000) is the only study on intelligibility that used Broadcast material (television and radio programs) as speech samples for assessing intelligibility of speakers. But his study was carried out in the South African context. Broadcast material offered several advantages which include: authenticity, mainly unscripted speech (although this depends on the genre); a wide range of speakers and topics; the absence of an "observer effect" in so far as there is no experimenter present; and ease of recording. Also, Sewell (2010) adds that studio recordings are thought to be ideal because of the low level of background noise.

8.5 Limitations and Suggestions for further research

I hope that the underlying themes and arguments I have raised, the research design, analysis and findings of this study have contributed to a greater understanding of the intelligibility of Nigerian speakers to international audiences as well as Nigerians with other L1 backgrounds. However, as with the bulk of empirical studies, the present study has some limitations, which I have identified in the discussion that follows. Where relevant, I identify areas for future research that emerge from these limitations.

First, my study relied on speech samples from broadcast materials (audio podcast) that were later played to participants for evaluation (in form of transcription exercise) in terms of the intelligibility of the speech samples. In this

way, the approach I used may be said to be limited by the fact that it conceptualises intelligibility as a one-dimensional construct. While research methodology using this approach provides insights into intelligibility of ELF communication, it does not fully represent the "interactional construct (the interactive nature of talk) constantly negotiated between speakers and listeners" (Smith 1992:76). Notwithstanding, by using this approach, my study offers some insights about the processes of cross-cultural communication that may have been difficult to achieve with other approaches. For instance, while a face to face communication or interaction, which is more multi-dimensional in nature may have reflected the interactional process between speakers and listeners, this may not have given so many instances of intelligibility breakdown. This is because, in interactions where a listener encounters a problem in understanding the speaker's utterance, he/she might let the unrecognised utterance "pass", on the assumption that it will become either clear or redundant as talk progresses. This may also be to avoid coming across as rude. In this line of reasoning, Firth (1996:244) adds that it is not clear if these problems are genuinely missed by the hearer or whether they were heard and allowed to pass. The effect of a "let it pass" strategy can lead to the speakers ignoring the problematic utterance/word altogether and abandoning the topic or point being discussed given the dynamic nature of speech. For example, Mauranen (2006) only found six obvious instances of misunderstanding in her five hours of data from Finnish universities.

In contrast, the methodology used in the present study offers two crucial advantages: first, it enabled me to investigate more precisely mismatches between the speakers' recordings and what the listeners heard. That is, it made

it possible for me to identify all the words or phrases the listeners had not understood. Second, it presents more permanent and easily verifiable records for further study and analysis (Tiffen, 1974; Atechi 2004; Munro et al., 2006; Deterding, 2013). A future study could test the findings by using different research methods.

Second, the present study focused on the intelligibility of English spoken by educated Nigerian speakers', with a special focus on 100 international listeners and 50 Nigerian listeners. Thus, the findings of this research might not be applicable to all Nigerian English speakers, and to non-Nigerian speakers at different proficiency levels. Future studies may generate new insights and extend current knowledge by replicating this study with different groups of speakers and listeners for example. It may also be interesting, and indeed useful for future research to examine the intelligibility of Nigerian speakers to different groups of Africans, e.g. Kenyans and Ghanaians. This is because Nigeria is gradually trading with African countries (Tiffen, 1974; Adetula, 2015), and Nigerian movies are increasingly being made popular in many African countries (Krings and Okome, 2013).

Finally, among the Nigerian listener's population, the study focused only on Hausa and Yoruba listeners because these are two of the three major languages in Nigeria. In addition, the two languages have the greatest number of speakers (as discussed in Chapter 3 section 3.1.2) and represent about half of the population of Nigeria. However, the findings provoke further enquiry into what differences, if any, may be found when other language groups are considered.

For instance, it will be interesting to investigate how the Igbo speakers (the third major language) and speakers from other minority languages understand the podcasts that were used in this study, and importantly, the causes of intelligibility breakdown, if any, they may experience.

In sum, the current research has indicated a rich and fascinating vein of work required to contribute to current knowledge and understanding of English intelligibility in the Nigerian context. Specifically, my research has added greatly to our understanding of the segmental features of pronunciation that hamper the intelligibility of Nigerian speakers when they communicate both in international and intranational contexts. As discussed, this understanding forms a useful foundation for reconsidering how English pronunciation is taught in Nigerian schools.

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APPENDIX 1: ETHICAL APPROVAL

The research for this project was submitted for ethics consideration under the reference MCL 13/011 in the Department of Media, Culture & Language and was approved under the procedures of the University of Roehampton's Ethics Committee on 15/10/2013.

APPENDIX 2: CONSENT FORMS

PARTICIPANT CONSENT FORM

Title of Research Project: Pronunciation Intelligibility of Nigerian Speakers of English

Brief Description of Research Project:

I am a PhD student at the Department of Media, Culture and Language, in the University of Roehampton and I am seeking your help in my research. This research is conducted as an academic project that will lead to an award of Doctor of Philosophy in English and Linguistics.

Purpose of the research

For my dissertation research, I am studying the Pronunciation Intelligibility of Nigerian Speakers of English and investigating their intelligibility to other speakers. This study intends to investigate the extent to which some pronunciation features in the speech of Nigeria Speakers of English affect their intelligibility to speakers from different contexts (non- native and native speakers) and the extent to which their first language (L1 henceforth) transfer contributes to this.

Mainly, I need to randomly select native speakers and international students willing to listen to six short excerpts and transcribe what they hear in standard orthography. Each excerpt will be used in a test session and participation will last for 45 minutes to avoid fatigue and flagging interest. The excerpt will be played phrase by phrase or unit by unit (Bansal 1976, Munro and Derwing 1995) to avoid

memory testing (Tiffen 1974). The listeners' responses will be collected and compared to the original versions of the speakers' text so as to allow the researcher to determine the pronunciation features that cause intelligibility breakdown.

Are you a native speaker of English or non-native speaker of English? Would you be willing to participate in my research? It will take only about 45mins to 1 hour of your time at most, for which there will be a little voucher of £5. Please fill out the Language background questionnaire if you are happy to take part.

Benefit of the research

English is a second language in Nigeria and international intelligibility may, therefore, be high on some speakers' list of priorities. Failure to speak in a way that is intelligible to a wider audience of listeners than that found in a local Nigerian context can be problematic if the speech is indeed directed to non-Nigerian listeners. Perhaps, the most distinct aspect of this study from the previous works is its focus on the pronunciation intelligibility of Nigerian English to Non-native listeners. Previous studies have been concerned with the intelligibility of Nigerian English to native speakers of English only (Tiffen 1974), but most interactions in English nowadays take place in the absence of native speakers, that is between NNS from different first language (L1). (Jenkins 2002, Rajadurai 2007).

In the specific context of Nigeria, this study is worthwhile because statistics show that one out of every four Africans is a Nigerian. Nigeria is the most populous Black nation and international student statistics for UK higher education in 2011/2012 shows that Nigeria is one of the top three non-EU sending countries.

Nigeria also plays a major role in international politics. For example, Nigeria is increasingly taking on roles in the comity of nations and so it is crucial that Nigerian speakers of English are internationally intelligible. Nigeria has contributed to various peace building and peace keeping efforts in places such as in Sierra Leone and Liberia and the Congo- ECOMOG (Sule 2013). Also, Nigeria is currently the largest economy in West Africa, second largest in Africa and international business is growing (Nigeria Delta Standard Report 2013).

The present research has the potential to have a huge impact on the teaching of English in Nigeria as it will raise awareness about the features that facilitate intelligibility in international setting and help teachers to focus more on the features in their classroom teaching.

The procedure for the research

The procedure will be made of three main parts: (1) the participants will be informed about the purpose of the research after which the Informed consent forms shall be distributed for them to read and attest their signature if they are happy to participate. After this, two different language background questionnaires (one for the native English speaker subjects and the other for the non-native Subjects) shall be given to the subjects to fill before the listening session.

(2) The second stage is the listening session with dictation task: the participants will be asked to listen to six short excerpts from a podcast produced by Nigerian speakers and transcribe or reproduce in written form exactly as possible what they hear in each of the six excerpts. The excerpt will be played phrase by phrase or unit by unit (Bansal 1976, Munro and Derwing 1995) with fifteen seconds

pause in between the units of utterance to avoid memory testing (Tiffen 1974). The listeners' responses will be collected and compared to the original versions of the speakers' text so as to allow the researcher to determine the pronunciation features that cause intelligibility breakdown.

(3) Interview stage: Based on the listeners' written version of the speakers' speech or podcast, the researcher will select 12 listeners or subjects who had difficulty understanding the excerpts produced by the Nigerian speakers in the listening stage. These subjects will be contacted two to four days after the listening and dictation task. These 12 listeners shall be given their scripts with their errors highlighted so they can reflect on it. The excerpts will be played again one unit at a time to these 12 subjects or listeners with their scripts in their hands. The listeners shall be asked to check their scripts with the underlined errors. The listeners shall be informed to check each of the words or sentences or units they had found difficult to understand and they will be told to make a comment if they could about why they thought they had found it difficult to understand each of the speakers or any one of them. They will be asked to self-reflect and to explain the motivations behind their linguistic behaviour and clarify what they thought the speakers had meant where this was unclear. This stage shall be recorded using a voice recorder upon the consent of the participants. They shall discuss what could have been the cause of their difficulty.

The listening test session is not a test of your intelligence; the test is purely for academic research purpose. You have the option to withdraw from the study, especially if it is not conducted in the way explicitly agreed in advance (British Association for Applied Linguistics) and this will not have any adverse effect on your course marks.

Confidentiality

To maintain confidentiality, the identity of the participants, who decide to take part in the research, will be anonymous in the study, and in any publications that arise from the research. In published reports of this study, participants will be listed by number and native language only, not by name or any other identifier. The data collection shall be for linguistic analysing only and you would remain anonymous, although certain ethnographic information as to your gender, approximate age, and linguistic background shall be obtained.

All data collected will be stored on a password protected university computer, which is stored securely. Once the project is complete, the data will be removed from the hard drive. The study shall be carried out in accordance with University of Roehampton ethical policies for research.

Investigator Contact Details:

Name: Fiyinfolu Olubunmi Idowu

Department: Media, Culture and Language

University address: University of Roehampton, Roehampton Lane, SW15 5PU, London, United Kingdom

Postcode: SW15 5PU

Email: idowuf@roehampton.ac.uk

Telephone:07550503678

Consent Statement:

I agree to take part in this research and I am aware that I am free to withdraw at any point. I understand that the information I provide will be treated in confidence by the investigator and that my identity will be protected in the publication of any findings.

Name …….

Signature ……

Date ……

Please note: if you have a concern about any aspect of your participation or any other queries please raise this with the investigator. However, if you would like to contact an independent party please contact the Head of Department (or if the researcher is a student you can also contact the Director of Studies.)

Director of Studies Contact Details:

Name: Prof. Tope Omoniyi

University Address: University of Roehampton, Roehampton Lane, SW15 5PU, London, United Kingdom.

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APPENDIX 3: REVISED QUESTIONNAIRES

QUESTIONNAIRE FOR INTERNATIONAL SUBJECTS OR NON-NATIVE SPEAKERS OF ENGLISH (LANGUAGE BACKGROUND SELF REPORT)

Subject Number _____ (Please leave blank)

Please, answer the following questions about yourself, your language knowledge, and your language use. Check in the box or fill in the space provided.

About you

(1) Would you describe your hearing as normal?

Yes ☐ No ☐

(2) Age: 18- 21 ☐ 22-29 ☐ 30-39 ☐ 40-49 ☐ 50- 59 ☐ 60+ ☐

(3) Gender: Male ☐ Female ☐ Other ☐

(4) Department of study (*if you are a student*):

EDS Education ☐

BS Business School ☐

MCL Media Culture and Language ☐

ECW English and Creative Writing ☐

DTP Drama, Theatre and Performance ☐

HUM Humanities ☐

DAN Dance ☐

LS Life Sciences ☐

PSY Psychology ☐

SS Social Sciences ☐

(5) Occupation _____ (if you are employed)

About your language background

(6) Where did you live between the ages of 2 and 10?

(7) What is your native language? _____

(8) Do you have any working language(s) in addition to your native language and English?

Yes ☐ (*If yes move to Q9*) No ☐ (*If No move to Q10*)

(9) Please list your working language(s) and indicate how often you speak each one

I. _____ (a) Often ☐ (b) Sometimes ☐ (c) Never ☐

II. _____ (a) Often ☐ (b) Sometimes ☐ (c) Never ☐

III. _____ (a) Often ☐ (b) Sometimes ☐ (c) Never ☐

(10) At what age did you start learning English? Please tick (√) one

(a) 0-5 ☐ (b) 6-13 ☐ (c) 14-19 ☐ (d) 20+ ☐

(11) How long have you been learning English altogether? _____

(12) What were your English teachers' native languages? *(If Known)*

School level *(e.g. elementary*) Teacher's native language

_____ _____

_____ _____

_____ _____

(13) What dialect of English did you study in school? Check all that apply *(if known).*

(a) American English ☐

(b) British English ☐

(c) Other English ☐ *(please specify)* _____

(14) How long have you lived in English-speaking countries in total?

_____

(15) Have you ever taken any English language test before? (*Such as IELTS, TOEFL or their equivalent)* Yes ☐ No ☐ (*if No, go to Q18)*

(16) Please provide your exam over all score

I. IELTS _____

II. TOEFL _____

III. Other _____ *(please specify)*

(17) Please provide your listening score (if known)

I. IELTS _____

II. TOEFL _____

III. Other _____ *(please specify)*

About your language interaction or use

(18) Over the past 12 months, have you communicated with English speaking Nigerians?

Yes ☐ No ☐ (*If no, go to Q21)*

(19) How often have you communicated with English speaking Nigerians over the past 12 months? (a) Rarely ☐ (b) Sometimes ☐ (c) Often ☐

(20) In what contexts did you interact with English speaking Nigerians on or off campus? (*Check options below*)

(a) Academically (e.g. in class lectures, class tutorials, Library) ☐

(b) Socially ☐

(c) Service counters (e.g., banking, ordering in a restaurant) ☐

(d) Medical or dental appointments ☐

(e) Other activities (Please specify) _____

(21) Have you spent a long period in Nigeria before with the exception of short holidays? (*For example, 3 months courses, exchange programme, a semester in Nigeria, a long stay with relatives, friends' etc.)*

Yes ☐ *(if yes, go to Q22 and 23)* No ☐ (*If no, you have now finished)*

(22) How many times have you been to Nigeria? _____

(23) What is the longest period of time you spent? _____months or year

Thank you very much for your participation!

Please provide your email address below for further contact on the next stage (Listening session):

Would you be interested in reviewing and discussing your listening test results with the researcher if your script is picked after the listening session? Yes ☐ No ☐

The review/interview session will be done few days after the listening test and you also have the right to opt out of the process (See the informed consent for full details). I understand that no identifying information will be used in publications of this research and my identity will be kept confidential.

During the course of this review process, I understand that my voice may be recorded which will be used by the researcher for present research. If you would like to opt out of this, please check the following box ☐

University of Roehampton London

QUESTIONNAIRE FOR **NATIVE ENGLISH SPEAKERS** (LANGUAGE BACKGROUND SELF REPORT). Do not write your name. Subject Number_____ (please leave blank). Please answer the following questions about yourself, your language background and use.

Tick (√) or fill in the space provided.

About you

(1) Would you describe your hearing as normal?

Yes ☐ No ☐

(2) Age: 18- 21 ☐ 22-29 ☐ 30-39 ☐ 40-49 ☐ 50- 59 ☐ 60+ ☐

(3) Gender: Male ☐ Female ☐ Other ☐

(4) Department of study (if you are a student):

EDS Education ☐

BS Business School ☐

MCL Media Culture and Language ☐

ECW English and Creative Writing ☐

DTP Drama, Theatre and Performance ☐

HUM Humanities ☐

DAN Dance ☐

LS Life Sciences ☐

PSY Psychology ☐

SS Social Sciences ☐

(5) Occupation _____ (if you are employed)

About your language background

(6) Where did you live between the ages of 2-10? _____

(7) Do you have any working language(s) besides English?

Yes ☐ (*If yes move to Q8*) No ☐ (*If No go to Q9*)

(8) Please list your working language(s) and indicate how often you speak each one

I. _____ (a) Often ☐ (b) Sometimes ☐ (c) Never ☐

II. _____ (a) Often ☐ (b) Sometimes ☐ (c) Never ☐

III. _____ (a) Often ☐ (b) Sometimes ☐ (c) Never ☐

About your language interaction or use

(9) Over the past 12 months, have you communicated with English speaking Nigerians?

Yes ☐ No ☐ (*If No, go to question 12*)

(10) How often have you communicated with English speaking Nigerians over the past 12 months?

(a) Rarely ☐ (b) Sometimes ☐ (c) Often ☐

(11) In what contexts did you communicate with English speaking Nigerians on or off campus?

(a) Academically (e.g. in class lectures, class tutorials, Library) ☐

(b) Socially ☐

(c) Service counters (e.g., banking, ordering in a restaurant) ☐

(d) Medical or dental appointments ☐

(e) Other activities (Please specify)

_____

(12) Have you spent a long period in Nigeria with the exception of short holidays? (*For example, 3 months courses, exchange programme, a semester in Nigeria, a long stay with relatives, friends' etc.)*

Yes ☐ *(if yes, go to Q13)* No ☐ (*If no, you have now finished)*

(13) How many times have you been to Nigeria? _____

(14) What is the longest period of time you spent? _____months or year

Thank you very much for your participation!

Please provide your email address below for further contact on the next stage (Listening session):

Would you be interested in reviewing and discussing your listening test results with the researcher if your script is picked after the listening session? Yes ☐ No ☐

The interview will be done few days after the listening test and you also have the right to opt out of the process (See the informed consent for full details). I understand that no identifying information will be used in publications of this research and my identity will be kept confidential.

During the course of this review process, I understand that my voice will be recorded which will be used by the researcher for present research.

If you would like to opt out of this, please check the following box ☐

APPENDIX 4: PILOT QUESTIONNAIRES

QUESTIONNAIRE FOR AMERICAN AND BRITISH SUBJECTS (LANGUAGE BACKGROUND SELF REPORT)

Do not write your name.

Please answer the following questions about yourself, your language background and use.

Tick or fill in the space provided.

(1) Would you describe your hearing as normal?

NO YES

(2) Age: _____ years

(3) Gender: _ MALE _ FEMALE _ OTHER

(4) Main Course of study (if you are a student) _____

(5) Occupation (for professionals) _____

(6) Are you a native speaker of British or American English? (i.e., was English your first language learned, and/or did you live in Britain or United States between the ages of 2 and 10? NO YES

(7) In which city (ies), state and country did you live between the ages of 2-10?

City _____ State _____

Country_____

City _____ State _____

Country_____

(8) Have you often talked to or hear English speaking Nigerians over the past 12 months?

(9) In your usual week activities during the past 12 months, in what contexts did you hear Nigerian English and for how many hours in each context?

In class (as a student)

____ Outside class with native English-speaking professors/students

_____ Socially with native English-speaking friends

_____ Outside class with non-native English-speaking profs/students

_____ Socially with non-native English-speaking friends

_____ Business transactions (e.g., banking, ordering in a restaurant)

_____ Medical or dental appointments

_____ Other activities (Please specify)

_____Never

(10) In your usual week activities during the past 12 months, with what frequency did you hear Nigerian English spoken by international students, faculty, or others on or off campus?

_____7 to 6 times a week

_____5 to 4 times a week

_____3 to 4 times a week

_____Twice a week or less

_____ Never

(11) In your usual week activities during the past 12 months, for how many hours did you hear Nigerian English spoken, in total, by international students, faculty, or others on or off campus? _____hours minutes

(12) In a typical week during the past 12 months, for how many hours did you hear foreign-accented English, spoken by international students, faculty, or others on or off campus? (Excluding Nigerian English) _____hours minutes

(13) Please give further details regarding your exposure to accented English if the two questions did not fit into your experiences.

_____

_____

_____

(14) Are you proficient, or fluent, in any language(s) besides English?

NO YES (Please specify)

(15) If you answered "yes" to the previous question, for how many hours do you speak this other language in a typical week? _____ Hours

(16) How much time have you spent abroad in the past 12 months?

_____months weeks

(17) Where was this time spent?

City _____ Country _____

(18) How much time have you spent abroad in your life altogether?

_____years months

Thank you very much for your participation!

University of Roehampton London

QUESTIONNAIRE FOR INTERNATIONAL SUBJECTS (LANGUAGE BACKGROUND SELF REPORT)

Subject Number _____

Kindly answer the following questions about yourself, your language knowledge, and your language use. Tick or fill in the space provided.

(1) Would you describe your hearing as normal?

NO YES

(2) Age: _____years

(3) Gender: MALE _ FEMALE _OTHER____

(4) Main course of study (for students) _____

(5) Occupation (for professionals) _____

(6) When did you start learning English?

(Please circle one. If your response is c, please specify additional information)

a. Elementary school (b). Junior High School (c). experience of staying abroad (country: length of stay: types of school attended)

(7) How long have you been studying English altogether?

_____ Years

(8) What were your English teachers' native languages?

_____ _____

_____ _____

(9) What dialect of English did you study in school? Check all that apply.

American English

British English

Other English (please specify) _____

If you checked more than one box, please describe these educational experiences in detail below.

_____

(10) How long have you been in English-speaking countries?

_____

(11) In what city, state/province, and country did you live between the ages of 2 and 10?

City _____ State/Province _____Country _____

(12) What is your native language?

(13) When you have been most frequently exposed to English, what varieties, and how often were you exposed to? (Please think of the native speaker English teachers you have interacted with and the teaching materials such as audio tapes you have used.) Check one box which you think is most appropriate.

	American, British, Australian Varieties of English	Other Varieties of English Please specify: ( )
3 to 4 times a week		
Twice a week or less		

Please describe the situation in detail if your case does not fit into any of above.

(14) Have you often talked to or hear English speaking Nigerians over the past 12 months?

(15) In your usual week activities during the past 12 months, with what frequency did you hear Nigerian English spoken by international students, faculty, or others on or off campus?

_____7 to 6 times a week

_____5 to 4 times a week

_____3 to 4 times a week

_____Twice a week or less

_____ Never

(16) In your usual week activities during the past 12 months, for how many hours did you hear Nigerian English spoken, in total, by international students, faculty, or others on or off campus?

(17) In a typical week during the past 12 months, for how many hours did you hear foreign-accented English, spoken by international students, faculty, or others on or off campus? (Excluding Nigerian English) ____

For questions 18 and 19, please insert the letter of the category that best describes the hours you have spent during **a typical week** in the past 12 months:

A) 0-1.99 hrs/wk D) 6-7.99 hrs/wk G) 12-13.99 hrs/wk

B) 2-3.99 hrs/wk E) 8-9.99 hrs/wk H) 14-15.99 hrs/wk

C) 4-5.99 hrs/wk F) 10-11.99 hrs/wk I) 16-17.99 hrs/wk

Note: If 18 hrs/wk or more, please specify the exact number of hours spent

(18) _____ How many total hours did you speak/listen in your native language?

_____ Outside class with professors/students in your field

_____ Socially with friends here in United Kingdom

_____ With family members here in United Kingdom

_____ On the phone or internet with friends (outside UK.)

_____ On the phone or internet with family members (outside UK.)

_____ Other activities (Please specify)

(19) If you are proficient, or fluent, in any other language(s) in addition to your native language and English, how many hours did you speak it/them?

Other language(s) (Please specify) NA

(20) Please provide your International English Language Test system (IELTS) exam score

_____

Thank you very much for your participation

APPENDIX 5: PARTICIPANTS' (NON-NIGERIAN) LIST

Key Terms of Major Fields

MCL- Media, Culture & Language; PSY- Psychology; ECW- English and Creative Writing; BS- Business School; LS- life Sciences; DAN- Dance; EDS- Education; HUM- Humanities; SS- Social-Sciences

A brief description of the background information of the international listeners

Listener Number	Gender	Major Field	Native language	Place lived btw 2-10	Nationality	Working language(s) aside English
1	Male	MCL	English	UK	British	Spanish, French
2	Female	MCL	German	Austria	Austrian	None
3	Female	MCL	English	UK	British	None
4	Female		Twi	Ghana	Ghanaian	None
5	Male	PSY	English	UK	British	None
6	Male	MCL	English	UK	British	None
7	Female	MCL	German	Austria	Austrian	German, Polish
8	Female	ECW	English	US	American	Armenian
9	Female	PSY	English	UK	British	
10	Male	BS	English	UK	British	Spanish, German, French
11	Female	BS	Marathi	India	Indian	Hindi
12	Female	BS	Twi	Ghana	Ghanaian	French
13	Female	PSY	English	UK	British	None
14	Female	LS	English	UK	British	None
15	Female	MCL	English	UK	British	None
16	Female	MCL	Portuguese	Brazil	Brazilian	Spanish
17	Female	MCL	English	UK	British	French, Spanish

18	Male	MCL	English	UK	British	None
19	Female	MCL	English	UK	British	None
20	Female	DAN	English	UK	British	None
21	Female	EDS	English	UK	British	None
22	Male	MCL	English	UK	British	None
23	Female	??	English	UK	British	None
24	Female	MCL	English	UK	British	None
25	Female	MCL	English	UK	British	Arabic
26	Female	LS	Norwegian	Norway	Norwegian	German
27	Female	MCL	French	France	French	Italian
28	Female	MCL	Catalan	Catalonia	Spanish	Spanish
29	Female	PSY	English	UK	British	None
30	Female	MCL	Spanish	Spain	Spanish	French, Catalan
31	Female	MCL	English	South Africa	South African	Afrikaans, Portuguese
32	Male	DAN	Chichewa	Malawi	Malawian	French
33	Female	MCL	Spanish	Spain	Spanish	Catalan
34	Female	MCL	Italian	Italy	Italian	Spanish, German
35	Female	MCL	English	UK	British	None
36	Female	MCL	English	UK	British	Arabic
37	Female	??	English	UK	British	None
38	Female	EDS	English	UK	British	Somali
39	Female	MCL	English	UK	British	Arabic
40	Female	??	English	UK	British	Somali
41	Female	EDS	English	UK	British	French, Italian
42	Male	MCL	English	Saudi Arabia	Saudi Arabian	Urdu
43	Male	EDS	English	UK	British	None
44	Female	MCL	English	UK	British	None

45	Female	MCL	Catalan	Spain	Spanish	Spanish, French
46	Male	??	Polish	Poland	Polish	None
47	Female	MCL	English	UK	British	
48	Female	BS	English	UK	British	Creole
49	Male	MCL	Norwegian	Norway	Norwegian	None
50	Male	MCL	English	US	American	None
51	Female	MCL	Greek	Greece	Greek	German, French
52	Male	MCL	Korean	South Korea	South Korean	None
53	Female	MCL	French	France	French	None
54	Female	??	Spanish	Spain	Spanish	None
55	Female	EDS	Spanish	Spain	Spanish	French
56	Female	MCL	Mandarin Chinese	China	Chinese	None
57	Male	MCL	Nepali	India	Nepalese	None
58	Male	MCL	Polish	Poland	Polish	French, Portuguese
59	Female	MCL	German	Germany	German	Spanish
60	Female	ECW	Norwegian	Norway	Norwegian	None
61	Female	DAN	Bengali	India	Indian	Hindi, Bengali
62	Male	MCL	Persian	Iran	Iranian	None
63	Female	MCL	Tamil	India	Indian	None
64	Female	MCL	Norwegian	Norway	Norwegian	German
65	Male	MCL	English	UK	British	Krio
66	Male	MCL	Chichewa	Malawi	Malawian	None
67	Female	MCL	German	German	German	French, Spanish
68	Female	MCL	English	UK	British	Somali, Arabic
69	Female	??	German	Germany	German	None

70	Female	MCL	German	Italy	Italian	Spanish, Italian, German
71	Female	ECW	Tamil	India	Indian	None
72	Female	HUM	Tamil	India	Indian	None
73	Female	MCL	Arabic	Saudi Arabia	Saudi Arabian	None
74	Female	MCL	Tamil	Germany	Indian	German
75	Male	EDS	Chichewa	Malawi	Malawian	None
76	Male	EDS	Chichewa	Malawi	Malawian	Malawi, Chichewa
77	Female	SS	Italian	Italy	Italian	None
78	Female	SS	English	US	American	Spanish
79	Male	HUM	Arabic	Palestine	Palestinian	None
80	Male	LS	Bengali	India	Indian	Hindi
81	Female	EDS	Thai	Thailand	Thai	French
82	Female	HUM	German	Germany	German	French
83	Female	PSY	English	Singapore	Singaporean	Mandarin, Malay
84	Male	BS	Twi	Ghana	Ghanaian	French
85	Female	EDS	Mandarin Chinese	China	Chinese	None
86	Female	PSY	Norwegian	Norway	Norwegian	Urdu
87	Female	MCL	Russian	Russia	Russian	Ukrainian
88	Female	MCL	Russian	Ukraine	Russian	German
89	Male	ECW	German	Germany	German	None
90	Female	PSY	Norwegian	Norway	Norwegian	Swedish, Danish
91	Male	??	Twi	Ghana	Ghanaian	French, German
92	Female	EDS	English	UK	British	None
93	Female	EDS	English	UK	British	None

94	Female	MCL	English	UK	British	Spanish, French
95	Female	PSY	English	UK	British	None
96	Female	PSY	English	UK	British	None
97	Female	PSY	English	US	American	None
98	Female	MCL	Greek	Greece	Greek	French
99	Female	PSY	English	US	American	None
100	Female	PSY	Romania	Romania	Romania	German

APPENDIX 6: SAMPLE OF VALIDATION EXERCISE

Validation Exercise

Please, compare the listener's text version (L) to the speaker's version (S) and then you are required to place each of the Listener's text into one of the degrees of intelligibility (TI, I, FI, PI, TU) according to the explanation provided.

Note: TI (totally intelligible has been excluded from the examples).

Examples from Speaker one

(1) S: /has nothing to do with my person. /

L: /*does that do my person.* / PI

(2) S: /and my Sundays, I have to rest. /

L: /*And my sons is helped to rest*/ TU (no sense to intended meaning)

(3) **S:** /and to still be me. /

L: / *and it still be me/* FI

(4) S: /Whoever you are, keep your head straight/.

L: /*whoever you are, be strict or straight/* PI

(5) **S**: /humility really matters, you have to be humble/.

L: /*you…. matters, you have to be humble/*. PI

(6) S: /I should be able to play any role/

L: /*and should be able to play a new role*. / PI

(7) S: /and I'm supposed to be versatile as an actress/.

L: / *and supposed to … …… as an actress/* PI

(8) S: I channel everything into it

L: */ I …. Need to read /* TU

(9) S: /so I work and rest together. /

L: */ so I **walk** and rest together/*. PI

(10) S: I channel everything into it/

L: */ I … … into it/* TU

(11) S: /Marriage has really changed a lot of things, /

L: */ my...changed a lot of things/* PI

(12) S: I channel everything into it/

L: /*I tell her everything I need to it/* TU

(13) S: Don't let power, money, fame get into your head.

L: / *don't let palm money, fame get into your head***.** / PI

(14) S: Whoever you are, keep your head straight.

L: *whoever you are, you should play it straight*. / PI

(15) S: /humility really matters, you have to be humble

L: / family really matters, you have to be humble. / PI

Examples from Speaker Two

(1) S: And eh presuming that others cannot quite attain/

L: /*and eh presuming that others cannot quite attend it/* PI

(2) S: And eh presuming that others cannot quite attain

L: */ and eh presuming that all those quite* / PI

(3) S: /That moral height em or even cultural em universalism/

L: / *that more height ehm or even cultural innoscalism*/ PI

(4) S: / you must not give offence here. /

L: /*you must not give offense here*/ TI

(5) S: Is this a kind of exterior directed dialogue

L: */is this kind of .... directed dialogue/* PI

(6) S: eh for the promotion of which we are neglecting the interior dialogue

L: /*eh for the promotion for which we are neglecting.... dialogue*/ PI

(7) S: That should take place among nations

L: / *that should take place .../* PI

(8) S: And therefore, you say oh no no no

L: /*and if you (?) say 'oh, no no no*, / FI

(9) S: that should take place among nations. /

L:/*that should take place of omniscience/* *PI*

(10) S: That moral height em or even cultural em universalism

L: */ about more height ehm or even cultural innoscalism*/ PI

(11) S: You are in effect giving offence because their position is not being articulated.

L: / *in a sense, their position has not been articulated*. / PI

If it was only "in effect" that was omitted, then we can classify as Intelligible

(12) S: you are in effect giving offence because their position is not being articulated.

L: /*you are in effect giving offence because their opinion is not being articulated/*I

(13) S: and eh presuming that others cannot quite attain

L: /*and uh, presuming others cannot quite obtain/* (I)

(14) S: You are in effect giving offence because their position is not being articulated.

L:/*you are in…. giving offence because their view is not being articulated*. (I)

(15) S: that should take place among nations. /

L: /*that should take this abominations/* PI

Examples from Speaker Three

(1) S: early in the eh 21st century.

L: ***I led into*** *the 21st century* PI

(2) S: and what do what are we saying? /

L: *and what* ***have we seen?*** PI

(3) S: /we are saying, yes, /

L: /***I'm*** *saying, yes*/ FI (This is a bit different but going by the criteria we need to classify it as FI)

(4) S: /If you want our resources,

L: */ If* ***we*** *want our resources*/ FI

(5) S: /China wants certain of our commodities

L: *China want* ***something*** *of our commodities*/ (I)

(6) S: if not the first as an African leader

L: *if not the first* ***South African*** *leader*/ (PI)

(7) S: early in the eh 21st century.

L: /**… … …..**21st century/ (TU)

(8) S: to have reasonable revenue from our resources.

L: / *to have* ***riskable*** *revenue from our resources*/. (PI)

(9) S: if not the first as an African leader

L: /**……**of an African leader/ (PI) we picked PI but it could fit into TU too, but we can stick with PI since you are going to analyse both criteria.

(10) S: or we will take loan at reasonable interest rate

L: /*or we* **…..** *take loan with reasonable interest rate*/ (FI)

(11) S: /If you want our resources/

L: *If you want **that** our resources* (I)

(12) S: let us let it be of mutual advantage. /

L: *let it be of **our** mutual advantage*. (I)

(13) S: or we will take loan at reasonable interest rate

L: *or we will take loan … … … rate* / (PI)

(14) S: or we will take loan at reasonable interest rate

L*:* *or we take low … interest rate* (PI)

(15) S: What does China want from us?

L: *What does Chairman want from us?* (PI)

Examples from Speaker Four

(1) S: and when I sit down at times/

L: /*but when I sit down all the time*/ (PI)

(2) S: or I'm in the midst of some people

L: / *or ehm in the mi..of some people*/ (PI)

(3) S: and I start to write/

L: */ and I start to ..../* (PI)

(4) S: I like, start to work on it/

L: */I like, start to walk on it*/ (PI)

(5) S: and when I sit down at times/

L: */when I sit down outside*/ (PI)

(6) S: some things just cross my mind/

L: /*some things does cross my mind/* (FI)

(7) S: A lot of things have really changed.

L: /*a lot of … have really ….* / (TU) No meaning

(8) S: erm acting and production wise,

L: /*… and production wise*, / (PI)

(9) S: and I start to write

L: /*and then I start to write/* (I)

(10) S: I've finished writing a movie.

L: */ I've finished writing my movie* (I)

(11) S: or I'm in the midst of some people

L: *or I'm in the mix of people*, (PI)

(12) S: we still have a very long way to go

L: *we used to have a long weeks ago still* (TU) No meaning

(13) S: Yes, we have really, really improved.

L: Things *have really really improved* (FI)

(14) S: we still have a very long way to go/

L: */ still have a very rich goal/* (TU)

(15) S: A lot of things have really changed.

L:/ *a lot of things are really changed/* (I)

Examples from Speaker Five

(1) S: has been our ability to consolidate on the gains

L: / *has been **an** ability to consolidate **on the???*** / (PI)

(2) S: /road networks, health care, education, opportunities for jobs

L: / road networks, healthcare … opportunities for jobs/ (PI)

(3) S: as the critical tool for changing people's lives.

L: /as a **critical???** for changing people's lives. / (PI)

(4) S: That will deliver all of the services

L: /*that **would** deliver all of the services*/ (I)

(5) S: That will make life sustainable and living for our people

L: /*that would make life **sustainable and????** for the people* / (PI)

(6) S: has been our ability to consolidate on the gains/

L: /*has been __ ability to consolidate on the gains*/ (FI)

(7) S: agriculture, transportation, and housing

L: /*agriculture, transport, and housing*/ (I)

(8) S: capacity building is critical,

L: /*capacity building is credit card*, / (PI)

(9) S: but they were independently enabling

L: /*but they were independently and nebby*/ (PI)

(10) S: well, ehm the reason that we exist as a government/

L: /*well ehm the reason …we exist as a government*/ (I) OR (TU)

but we stick to (I) because is not an exact match

(11) S: those sectors were not only interdependent

L: those sectors were … … interdependent (PI)

(12) S: to deepen access of our people to services,

L: /*to dipping access to our people to service*/ (PI)

(13) S: and to continue to reinforce the importance

L: / *and … continue to reinforce the importance/* (I)

(14) S: That will make life sustainable and living for our people

L: *That would make life sustainable and relieving (?) for our people* (PI)

(15) S: of budgeting in a constitutional democracy/

L: *of projecting in a constitutional democracy* (PI)

Examples from Speaker Six

(1) S: em who feel that there is no point trying to buck the system.

L: */ who feel that there is no point ___ to back the system*/ (PI)

(2) S: A weight of imposition, sense of additional duties; /

L: */ a wait of imposition, a imposition in sense of additional …*/ (PI)

(3) S: And the only way I cope with it,

L: /*and the other way that I cope with it*/ (I)

(4) S: And sometimes even when they have a voice,

L: / eh and sometimes even when they have a..., / (PI)

(5) S: em who feel that there is no point trying to buck the system. /

L: */ eh who feel that there is not point trying to mock the system* (PI)

(6) S: A weight of imposition, sense of additional duties;

L: */ a imposition, a weight of essential duties*/ (TU)

(7) S: That even if they entered the political party,

L: */but even if they entered a political party*/ (I)

(8) S: they will not be allowed to fully express /

L: / *they would not be allowed fully to express*/ (I)

(9) S: Without erm looking back necessarily

L: / *erm without erm without erm looking back*…/ (FI)

(10) S: The first thing is that, I hate titles.

L: /*the first thing is that I hate idols*/ (PI)

(11) S: A weight of imposition, sense of additional duties; /

L: /*await of imposition, sense of additional duty*/(I) this is just a spelling mistake and should be classify as (I)

(12) S: and contribute to the development of the nation.

L: / *and contribute to the development of… nation/* (I)

(13) S: And then, the people with whom we formed this party,

L: /*and the people who are from within this party*/ (TU)

(14) S: for the expression of their voice,

L: /*of expression of their voice*, / (FI)

(15) S: This is especially so

L: /*this is especially …*/ (FI)

APPENDIX 7: PODCAST TRANSCRIPTION

Speaker One

I am not worried because am an actress. / I should be able to play any role/ and am supposed to be versatile as an actress. /So, playing Jennifer and playing other roles/ has nothing to do with my person.

Well, I love my job so much. / If am not resting, am working. / Even while working, I rest. / I'm a producer, I'm a writer. /All my movies, I write them, and I produce them / and I play the lead characters. / So, any spare time I have, I rest. / So, I work and rest together. /Marriage has really changed a lot of things, / I must go on vacation, its important /and my Sundays, I have to rest. / Yes, the character Jennifer its crazy. / I channel everything into it/ to get the character/ and to still be me. /

Just be yourself, be original. / don't let power, money, fame get into your head. / Just be you. / Whoever you are, keep your head straight. /humility really matters, you have to be humble.

Speaker Two

I find the very notion of political correctness/ very condescending./ eh It's an assumption of a kind of em em/ standing on higher moral grounds/ and em presuming that others cannot quite attain/ that moral height or even cultural universalism/ and therefore you say oh no no no/ you must not give offence here./ and then, you don't ask yourself the question, (just)/ when you say you are not giving offence,/ do you really understand to how many millions/ you are in effect

giving offence because their position is not being articulated./ In other words, when we talk about culture for instance / Cultural dialogue we don't ask ourselves,/ Is this a kind of exterior directed dialogue/eh for the promotion of which we are neglecting the interior dialogue/ that should take place among nations./ In other words, whose culture is it really /and who defines the culture?/

Speaker Three

Em I was the first or one of the first, / if not the first as an African leader/ who eh established strategic partnership with China/ early in the eh 21st century. / and what do what are we saying? / We are saying, yes, / whatever you want that we have/ let us let it be of mutual advantage. We want something and what do we want? /We want to be able/ to have reasonable revenue from our resources. /If you want our resources, / we need that our laws and rules must be respected. / We want infrastructure/ and if you can give us that, / yes, and we will pay for it either directly/ or we will take loan at reasonable interest rate /and we pay as and when due. / Now this is what we want/ and this is what we should get. /and then we say alright. / When we do this, it's for mutual benefit. /What does China want from us? /China wants certain of our commodities /to enhance their own development and keep it going /.

Speaker Four

A lot of things have really changed. / acting and production wise, /yes, we have really, really improved. /And I still believe, / we still have a very long way to go/

and sky is our limit. /a lot of people don't get to know that/ I'm an introvert person. / I am most of the time by myself /and when I sit down at times/ some things just cross my mind/ and I start to write/ or I'm in the midst of some people/ and I see things./ By the time, I get back into my privacy,/ I like, start to work on it/ and before you know it,/ I've finished writing a movie./ And for me to actually get what I want,/ in whatever I had written,/ I prefer to produce it myself/ so that nothing gets missing in it./

Speaker Five

Well, I think that the biggest achievement for 2012/ has been our ability to consolidate on the gains/ that we have made in the past/ to deepen access of our people to services, /road networks, health care, education, opportunities for jobs /and to continue to reinforce the importance /of budgeting in a constitutional democracy/ as the critical tool for changing people's lives. Yeah, our decision to focus on power, /agriculture, transportation, and housing /was in response to the feedback we were getting, /the compelling needs to create jobs, beyond banking and telecoms. /and we thought that/ those sectors were not only interdependent/ but they were independently enabling/ to create total growth in the economy.

Well, erm the reason that we exist as a government/ is to deal with challenges /so they exist in their full measure /but I think the point to make first is that, / capacity building is critical, /knowledge, education, skilled engineers, /skilled teachers to produce those engineers /and to develop the human capital /that will deliver all of the services /that will make life sustainable and living for our people /are some of the challenges that we are dealing with.

Speaker Six

The first thing is that, I hate titles. / I really do. / and then er when such a title er carries with it, / a weight of imposition, imposition sense of additional duties; /and enlargement of ones' constituency/ *Yes it becomes very much a burden*/ and the only way I cope with it, / is just to ignore that title completely/ and carry on with whatever I feel comfortable doing / without looking back necessarily. /There are many voiceless people in Nigeria. / and sometimes even when they have a voice, /when they have a platform/ for the expression of their voice, / they find they cannot really relate/ to any of the existing political parties. /This is especially so /of a very idealistic youth / who feel that there is no point trying to buck the system. / That even if they entered the political party, / they will not be allowed to fully express / what ideas they have /and contribute to the development of the nation. / And then, the people with whom we formed this party, /we emphasised from the very beginning/ that politics should not be about the position at the top.

APPENDIX 8: SPEAKERS' BIO DATA INFO

A brief description of the background information of the six Yoruba speakers

The first speaker is a 38 year- old female Nollywood Yoruba actress, a movie producer and a native Yoruba speaker of English, born and grew up in Lagos, Nigeria. She received her primary and secondary education in Lagos and then obtained an Ordinary National Diploma (OND) qualification in mass communication from Ogun state Polytechnic. After obtaining her OND qualification, she then proceeded to University of Lagos, Nigeria where she obtained a degree in law. She has featured in a number of Yoruba and English movies and won the Africa Movie Academy Award for Best Actress in a leading role as Jenifa in 2009.

The second speaker is an 80 year- old male speaker and a native Yoruba speaker of English, who was born in the city of Abeokuta, Ogun state in Nigeria. He is a Nigerian playwright, a poet and an emeritus professor of creative writing. He obtained his primary and secondary education in Abeokuta, Nigeria and afterwards went to University College in Ibadan, Oyo state, Nigeria. After finishing his studies in University College Ibadan, he moved to England and continued his education at the University of Leeds where he obtained his doctorate. He worked for one year at the Royal court theatre in London and later returned to Nigeria to study African drama. He gave the Reith Lecture (a series of annual radio lectures given by leading figures of the day and broadcast on BBC radio 4) in 2003, 2004 and has spoken at various international events where he is identified as a "Nigerian Nobel Laureate for literature (1986)", and diplomats. He is a member of

the High-Level Panel on Peace and Dialogue among Cultures, established in 2010 by UNESCOs Director- General, Irina Bokova. The High-Level Panel includes pre-eminent political, intellectual and religious personalities from all regions. Its members have been asked to reflect on and restore the construction of peace founded on gender equality, justice, respect for human rights and solidarity, in the context of globalization and the challenges it poses, such as climate change, management of resources and ethical and economic issues. The mission of the Panels is to re-sound UNESCOs message of peace in the world through education, science, culture, information and communication.

The third speaker is a 74 year- old male speaker and a native Nigerian Yoruba Speaker of English, who was born in Ogun state and grew up in Owu in Abeokuta, western part of Nigeria. He was a career soldier before serving twice as Nigerian's head of state, Africa's most populous nation, from 1999 to 2007. He has been involved in international interview on BBC world news and other international TV. He has played a key role in the redevelopment and repositioning of the African Union, including helping to establish the New Partnership for Africa's Development (NEPAD) and the African Peer Review Mechanism (APRM), designed to promote democracy and good governance. He has always supported the deepening and widening of regional cooperation through the Economic Community of West African States (ECOWAS) and the Co-prosperity Alliance Zone incorporating Benin, Ghana, Nigeria and Togo. He has served as chairman of the Group of 77, chairman of the Commonwealth Heads of Government Meeting, and chairman of the NEPAD Heads of State and Government Implementation Committee. He has also been involved in

international mediation efforts in Angola, Burundi, Namibia, Mozambique and South Africa. In 2008 he was appointed special Envoy on the Great Lakes region by UN Secretary-General Ban Ki-moon, and continues to be an integral actor in mediation efforts in eastern Democratic Republic of the Congo. This speaker has also served as the African Union's Special Envoy for Togo's 2010 Presidential elections, as well as South Africa's presidential polls in 2009 (Africa Progress Panel 2014). In July 2013, he headed a delegation of African union election observers monitoring the presidential and parliamentary elections in Zimbabwe. He is also a founder of a UK based charity organisation that has a mission of advancing human security for all.

The fourth speaker is a 48 year- old female Nollywood Yoruba actress, a businesswoman and a graduate of Economics at the University of Lagos, one of the Nigerian leading universities. She is a native Yoruba speaker of English, born in Abeokuta, Ogun state and grew up in Nigeria. She has featured in several Nollywood movies of Yoruba and English languages, including soap operas.

The fifth speaker is a 51 year- old male speaker and a native Nigerian Yoruba Speaker of English, who was born and grew up in Lagos, south western part of Nigeria. He obtained his primary and secondary education in Lagos and thereafter went to the University of Benin, Nigeria and graduated with a Bachelor of Laws degree. He is twice the Governor of Lagos state, the largest and commercial capital centre of the federal republic of Nigeria. As the governor of Nigeria economic capital, he has made several international business meetings,

conferences, interviews, speeches and remarks which include welcome remarks to the prime Minister of Britain, Mr David Cameron. He is an influential member of one of the major political parties in Nigeria. He plays an active role in the political system of Nigeria.

The sixth speaker is the same speaker as speaker two.